A Sketch

OF THE

LIFE AND PROFESSIONAL CAREER

OF

CHARLES HILTON FAGGE.[1]

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VERY few years have elapsed since the honoured name of John Hilton had for all Guy's men the same melancholy interest as now surrounds the name of his nephew. Hilton's loss was deeply felt, though he died full of years and of well-merited honours. But there is bitter disappointment mingled with our sorrow as we see Fagge take his place in that dimmed light reflected off the face of each one as he finally recedes from the gaze of the men amongst whom he lived and worked. Those who knew Mr. Hilton will not think it out of the course of hereditary nature that another of the same stock should be born to acquire greatness. Indeed Hilton and Fagge were men whose excellence was due to their natural power; and although perhaps their family likeness was not evident at first sight, yet, in truth, it was for the most part the same kind of power that formed the foundation of character in each of these great healers of men. The robust figure and rather rallying address of Hilton might strike one as contrasting with the milder outlines and most unaggressively influential presence of Fagge. But those who knew Mr. Hilton learned to regard in him a refined delicacy of sentiment which was more upon the surface in Fagge. Whilst those who knew Fagge were aware of his most robust strength of resolution when circumstances gave occasion for determination of purpose. He was sensitive, but his sensitiveness was gentleness, not weakness. But in both men the ruling power that governed and controlled and directed alike themselves and all whom their influence prevailed with, was innate honesty and truthfulness—the power in which they lived and moved, and had their being. I say innate, because it seemed as if instinctively Hilton and Fagge always had a sure grasp of the reality and the practical significancy of truth and fact. The reason has its instincts, and it appears to me that some happy men are born with a natural power of ignoring irrelevant bearings in matters under inquiry. People talk as if instinct was always animal and reason always human, but there is human instinct as there is animal reason. True, the human race collectively elects to pride itself on reason, and would for the most part say little about human instinct. Perhaps this is because it has suffered much from the human instincts of its leaders, and under their influence has gone rather unreasonably and unsteadily. So that the world has learned to distrust instinct and to say always its good things in favour of reason, even when not following it. But the true human instinct is social goodness of aim; the identification of self with interests that are socially constructive, and positive, and real. This true type of manhood was embodied in Hilton and Fagge, and made them in the highest sense good men. Men in whose presence the faculty of imitation was a blessing and made a better man of you. Men devoted to faithful inquiry; free, yet always affirmative. It is so tawdry easy to be free and negative. But these men seemed incapable of mere negative questions. Well, call it incapacity if you will. Let it be a limit of vision which keeps some of the most clear-sighted of men from seeing the interest of those questions which in their negative results annul all that humanity is founded on; those questions by forcible aversion from which human society became possible. Perhaps it is partial blindness; but if it were not for the blindness in the backs of our heads, we probably should never have learned to go forward; and any human monstrosities with mental eyes all round, behind and before, need not be proud of such universality of view.

The limitation of the field of inquiry has been the cause of the greater productiveness of modern as compared with ancient philosophy. In modern philosophy we turn away from all questions that do not lead to beliefs, and thus we escape metaphysics. It is only by belief we are saved from metaphysics. It is sound sense and sound sense knowledge that saves us: knowledge always referable to and founded upon our five or six senses; communicable knowledge capable of becoming what we call common sense, which is the mutual use of their senses by a sufficient number of persons. Patience in direct observation of nature, seeing and measuring and weighing and recording, and so having true beliefs—beliefs founded on sense-knowledge of nature; such beliefs as are always mutually realisable, and therefore sure. Belief is, in the mind, the equivalent of sensuous realisation. It is the same thing to believe in the mind as to realise by sensation. Belief is the special sense of the higher intellect. It surpasses sensation, but is founded on it. When there is no belief beyond the evidence of the senses, it is as if the fire fails to glow out beyond the fuel and dies down amongst the embers. Yet belief must be in continuity with sensation, even if that continuity is as indirect as the laying on of hands in the Apostolic Succession. By faithful belief are we *still* saved. Saved from metaphysics, which is mental humanity floundering with eyes all round the back of its head. This philosophy, which I feebly try to express, began with Bacon, and led to the development of what we now call "science," which, as it has all its grounds directly in the senses, might be called "five-sense philosophy." Like all other human things, it is never safe when too confident, and even now might at any time come to a bad end and go off into the most rubbishy metaphysics—such as those shadowed in the latest phases of Comte or of Huxley. That is, if science were so weak as to follow the reactionary turn of its leaders when they grow tired of being five-sense sensible, and try to escape from the narrow limits of sense. For the limits of five-sense philosophy are so narrow that the end can be seen from the beginning. It is very curious that Bacon, in his "Novum Organum," should at once have proceeded on the assumption that forms, as he called them, are kinds of mechanical motion. (He meant by forms forces expressed in terms of laws.) The most advanced five-sense philosophy has got no further than this. And, in truth, our five senses are just five means of analysing, or revealing to us, the properties of motion. And every whim and dream in Bethlem Hospital, alike in the patients and in the physicians, is just an analysis or revelation of the nature of motion. And Bacon saw this in a foreshortened kind of way directly he looked as far as possible ahead along his new five-sense philosophy. I have called it an analysis or revelation, but, of course, you will see that these two are the reverse of each other. Analysis is the human mental progress from the special to the general. Revelation is the divine progression from the general to the special, in which line we enjoy just as much as God lets us; and we may just as well see it all very humbly. If God had given us two or three more senses we should have experienced just so much more of this analysis or revelation of the nature and properties of motion. Hilton and Fagge were instinctively observers. There was no possibility of rubbishy metaphysics about them. They recognised that the world of true and faithful inquiry is still, as always, bounded by a limbo of faithless questioning and faithless doubting—a limbo in which the luxury of doubting makes science as impossible as it makes religion. Science also has its duties of belief, of good faith, of trustworthy purpose; and those who revel in the ethereal joys of idealist and transcendental scepticism are by comparison with such men as Hilton and Fagge merely human flummery. Modern science is securely founded in the sense knowledge of nature. This knowledge is now brought in with ever-increasing enthusiasm. There is a solidarity about the system of its collection. The certainty and communicability of each result give to its discoverer a recognised distinction to reward him amongst his fellows. Each contributor gets credit for his contribution, even the smallest. This is of course extremely satisfactory, seeing that everything contributed is what is perhaps tautologically called "real fact"—tautologically unless facts are liable to be unreal, which in this inscrutable world may be really the case. And for evidence, I need not refer only to the S.P.G.S.—the Society for the Propagation of Ghost Stories. But it is as well to notice the weakness of a too enthusiastic pursuit of the sense-knowledge of nature. Five-sense philosophy has no right to suppose itself to have other grounds of per-

[1] This paper was written too late for its place in the Guy's Hosp. Reports.

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sistence than those enjoyed by the five senses themselves; and we know that the five senses only maintain their place in the animal economy by reason of their constant and continued usefulness. When of no service they go. Why, then, should five-sense philosophy hope to maintain its place in the social economy on any other grounds than those of its continued usefulness? The eyes of creatures in a certain cave in Kentucky have disappeared wholesale. Bats that fly of a night have no eyes to speak of. It is true that owls that also fly of a night have wonderfully great eyes, which is a very remarkable and instructive fact. Taken with the natural history of bats it shows that when the amount of light which exists is insufficient there are two natural ways of dealing with the difficulty; one, like the bat, of giving it up altogether and losing the organ through which light is used, the other of doing the very best you can with what light there is, in which case you are rewarded with extra splendid organs of sight. In this way the owl acquired extremely powerful organs of vision, and was therefore made the type of wisdom, which again is a remarkable thing; because the owl got those wise-looking eyes by a habit of looking after its business in the dusk, whereas the twenty-four hours had always brought as much good daylight to owls as to other people, but the owl chose to be most active in the dusk, and so got great eyes and was taken as the type of wisdom. Whereas other birds remained less wise-looking because they kept active in full daylight, where they were not obliged to goggle their eyes after obscure things. And five-sense philosophy may acquire a reputation for wisdom on principles parallel with those which gave the owl great eyes, and may grow so clever in flying deeper and deeper into the dusk that in the daylight amongst ordinary birds it may be reduced to blinking and looking goggley. For social full daylight treats little questions, not by studying them as stars are studied in the dusk, but by drowning them and overwhelming them as stars are overwhelmed in the daylight. Five-sense philosophy, or science, as it is called, may be lost with bat's eyes, or be grown all a-goggle with owlish exaggeration of acuteness. Too great to fit it for the natural sunlit world in which men will always have their chief enjoyments, and therefore their chief interests, even though their relation to light be much like that of so many blue-bottles buzzing up and down a window pane, unable to perceive that the lightest way is not the best. If we carry inquiry after sense-knowledge into extremes that are out of relation to any natural social requirement, all excess of the kind will prove as flummery, as mere metaphysics. Sense-knowledge beyond what is serviceable is a luxury.

Any who are naturally led to indulge in the luxury of unrestrained inquiry owe more than they are apt to pay to those devoted minds who so use the tree of knowledge that it shall bring forth good fruit for our service. There is so much that is tempting in the vast range of medical study calculated to call men off in even the most praiseworthy spirit of search after sense-truth, so that some in their thirst for exact results are drawn into exaggerated intricacies of physiology, and others in the charm of inexact results let us into watery glancing whirlpools of psychology with a chapter on the "Disintegration of the Ego." Others wander into social problems. Seeing how many are lured away by these temptations, should we not very highly appreciate those men who are enthusiastic and devoted, and nevertheless are so well balanced that they give their lives to their proper business of laboriously and tediously following, and patiently studying, those most difficult and fugacious of all objective realities, clinical facts?—transitory phases of complicated problems which so readily escape even the quickest eye, and are so difficult to record in the most tenacious memory. Herein was Fagge's special greatness. He was the physician by grace of nature. He was gifted with quickness and with patience in observation. He had a genius of the eye for clinical facts. It needs something almost creative in the eye of the observer who will gather the signification of the successive scattered appearances that make up a clinical fact. It is a high example of that power which, perhaps, is best illustrated by its likeness to what we have all seen in the twirling toy called a thaumatrope? the power which blends fragments and snatches of view into unity of form and visual continuity. We ordinary physicians owe more than a passing tribute to men of this rare power. The genius of the eye which makes an "observer" such as Sydenham and Addison, and in our day Hutchinson, was possessed in a high degree by Fagge. It is an admirable genius; it requires a quick seizure and a tenacious hold of things, whilst they are yet developing and not ripe for communication. Such as each man must know for himself, as perceptions which give him his special experience—things such as each man ought to keep to himself until they are worth communicating. Some would-be Sydenhams have a painful incontinence of these perceptions, sending them out in a hurry, as if they instinctively feel that they will not keep. But there are men who have a much more truthfully realising sight than others. They perceive more quickly what it is that they see, and they remember more tenaciously what it was that they perceived. It is a gift. You may develop your share of it, but you cannot draw yourself up higher in it than you were born to rise, and when you are, so to speak, on tiptoe, such men as Fagge are above you. But such men are rare. This genius of the special senses of eye or of ear is a sign of good derivation. Fagge was of good derivation. He had good eyes and a portion of his brain acted instinctively with his eyes. This is another curious thing, and it is worth while to reflect upon it a little. In Fagge the optic lobes, which are the brain of the eyes, wherein resides the genius of sight, had not dwindled quite away. These good eyes and persistent optic lobes saved him—saved him from a danger which was especially perilous to him on account of his amazing power of quickly apprehending and tenaciously holding other people's views. If you can rapidly pick up other people's views you hardly want eyes. And Fagge's power of appropriating views was something almost incredible. It enabled him to perform that startlingly striking feat which at the London University is ever memorable. Lest his great feat of student learning should have been lost sight of in the greater lustre of his later career, I will shortly tell the story of it. When Fagge went up for his First M.B. at the London University there were three exhibitions and four gold medals as rewards for chief distinction in four widely different and large subjects—namely, anatomy, chemistry, materia medica, and botany. Now, Fagge took all these exhibitions and gold medals. Truly, never was an advanced educational embryo in greater danger. Wise men shook their heads, and said, "Ah! these prize-takers never do anything original." And the wise men were almost ready to pity the poor fellow, especially those wise men who had not themselves done quite so much at the First M.B.

It was with this evil presage that my late friend entered upon the real life in which the student and all that he did is soon lost sight of. And as I speak now in admiration of Fagge, I do believe the danger indicated by those wise men was a real danger. Indeed, other prize-takers who did nearly as much remain pitiable examples of the risk. The more thoughtfully you contemplate the circumstances the more real will the danger appear. It is not merely the danger lest the future life of the man should be of small excellence in comparison with the brilliance of first achievement. This danger is real in its way; it spoils the idea of a life when from a large foundation a low elevation is reached. A vast memory spreads a wide base for your edification, and if what you construct upon it goes no higher than that which your competitors raise on their narrower base, then, if I may so metaphorically speak, the proportion of broad base to low height in you makes a squat sort of pyramid of you; and your competitors with narrower base and equal height give the impression of sharper fellows. And so a short memory may even confer advantages on a reputation for sharpness, especially as shortness of memory is apt to first affect the knowledge your competitors have of where they got the little they happen to know. And Fagge had an immense memory, and in his student life spread a vast base for that constructive future, which is the proof of real value by which a life has to be estimated. His immense memory endangered his optic lobes lest he should disuse his own optic lobes and trust to views got at secondhand into his cerebrum from other people without putting his own eyes to any use or practising his own optic lobes. The optic lobe or brain of the eye, like many other good things, has a tendency to dwindle as you go on in life. It begins dwindling very early in you—in fact, almost before you are yourself at all. When your embryo is going through its very early periods in the fish stage, in the bird stage, and so on to the monkey stage, as it is gradually, in the fulness of time, to become a man-child, you—that is, your embryo—have very large optic lobes, corresponding to the great eye-brains which characterise fishes and birds, and so on. But in becoming human the optic lobes dwindle in you so that you cannot, as a human being, realise what sight is in the more perfect eyes—say, for instance, even in a robin, that can see the tail of a worm in the grass 30 ft. off, so that it can go straight off an apple tree to that tail with unerring sureness; or in a chicken,

that becomes familiar with the whole world as known to chickens in the first two winks it gives after leaving its egg-shell and stretching its legs. The human sucking embryo stretches its legs and winks for whole months, and sees nothing at all with his miserable dwindled optic lobes and his jelly-looking eyes. The reason, of course, is, that the human baby is not so immediately dependent on his eyes as the chicken is that has at once to look about when it is hatched and pick up all it can for lack of mother's milk. The human mother's eyes do duty for those of her offspring. Hence the eyes and optic lobes of your embyro were allowed to dwindle immensely, whilst your cerebrum grew disproportionately great. As a man-child you begin life by thinking about what other people see, and your thinking machine or cerebrum becomes so much more active a thing that you may think a great deal in proportion to what you see all your life; in fact, your over-active big cerebrum may press down on your tentorium cerebelli, and so sit heavily upon and oppress and squash and quell the more vital parts beneath the tentorium; and the optic lobes are perhaps still worse off, having no tentorium to protect them from the pressure. Everything in nature is on compensation principles. Brains enough to make you stand upright weigh on the roots of your eyes when you are up. And just as your mother will see for you whilst you are a sucking embyro, so your teachers will see for you during your educational embyro stage. As a modern young man with any cerebrum to speak of, you need never use your own optic lobes—in fact, your eyes may almost be kept for mere ornament. Of course, this is not only true of vision, but of much else, so that your mother may supplement your little goodness by her greater goodness, until you shall have no opportunity of practising the little goodness of your own, and when you are left to yourself you may find your little stock of original goodness scarcely enough to keep your character decent when away from your mother's wing. And even when you are what is called adult, everybody all around you will supplement your imperfections, will see for you and hear for you, do anything for you for a very small return of flattery. That is the great advantage of social life in high states of civilisation. They will not only hear for you and see for you, but will tell you what you ought to think about it all. And so you may be completely civilised into a kind of Nirvana, and exist without the trouble of either seeing or hearing or thinking; and in this Nirvana you may gaze listlessly across at Schopenhauer and sleepily express how divine an existence of the Epicurean gods it all becomes—nothing worthy of attention and nothing getting any, because other people do it all for the sake of some equivalent as trifling as the whole affair deserves. Into this Nirvana-perfection of civilisation the modern young man can enter without ever having had to use his own eyes except as a kind of ornament on his very intellectual face, or to preserve his mental balance by recognising objects as he has been taught them, or to avoid knocking against inconvenient realities. And modern philosophy is, as we have seen, so thoroughly founded on the real and true, as sensuously known, that the modern young man can afford to be trustful. His teachers do really know, and he may accept their views. Why should he use his own eyes? He can see so little at a time, and with his dwindled and disused optic lobes perceives so little of what he sees, that looking is a waste of time compared with the facility with which he can pick up other people's views and adopt them in his cerebrum, and say, "Yes, I see"; and so he says, "Yes, I see" without ever looking. And he does not move your pity like the poor man blind from his birth who rolls his chalky wasted eyeballs and speaks of sight when of its saddest want he is for the moment oblivious as he says, "I see," in happy delusion that your sight is his. The modern civilised Nirvana young man, speaking of his views and saying "I see," does not move your pity, though he never did see anything of the fact of the matter any more than if he were blind from his birth. His sad privation is not so touching. You cannot see his poor, wasted, atrophied optic lobes, and his eyes appear all right to look at.

But Fagge was no mere collector of other people's views. He was of good derivation, and had persistent optic lobes. He was a seer; he was no mere cyclopædia with a self-acting index edited on the principle that knowledge is power. His gift of sight brought his large knowledge to bear; there was the man as well as the knowledge. Let knowledge be power if you will, but some character is wanted to determine the effect of it. The Assyrians seem to have perceived this, and to have inscribed it in a symbolic way at the doors of their palaces, putting the body of a bull or a lion to the head of a man—hinting that if you know like a man you must be ready to act like a bull or lion if you are going to live in a palace. The Assyrian man-headed bull was not far wrong. It was more right than the griffin coat of arms of the Middle Ages, which left the man out altogether; but they were scarcely human then. Knowledge is not power. The relation of knowledge to power, like all high truth, can only be expressed in symbols; but at least one may say that the head full of knowledge needs a character which shall determine its use. The greater the knowledge, the more powerful must be the character; and Fagge was a great physician because, with his immense knowledge, he had the character of a physician. Our modern governments by the lower middle class, the industrial and positive class, who are able to know positively all that can be known positively, and who do not care for symbols nor for whatever can only be expressed in symbols—this lower middle class government has determined that knowledge is power; and, as the nation must be powerful, it compels everybody to know, and fits them with knowledge; as it were with firearms or dynamite. In the lower middle class of great communities knowledge is everything; the vast web of human knowledge surrounds you and occupies the whole horizon, like the brick buildings of the vast community which nearly everywhere shut out the sky. Each man's knowledge is so small and fragmentary that he must for his hold on existence look around to his fellow men whose vast knowledge can supplement his few trifles. He need no longer look up to God, as they used to do when human knowledge had not occupied all the heavens and the earth with five-sense certainties. And so the lower middle class, our masters, entirely believe that knowledge is power, and the logic is something thus: Whoever can be taught can know; and whoever can know can do, because knowledge is power; and what care we for intellectual considerations—for instance, whether a beard comes on the face of knowledge. Let us ask of the beard "Whence art thou?" And as it retires abashed, let us treat the widest knowledge as the greatest power. *Hic itur ad astra.* Celestial! Did not the Chinese learn to award all positions of power in virtue of knowledge and success at examinations, and did not they soon find and call themselves celestial? They managed the natural tendency of females to excel in mere knowledge better than we do. They persuaded the sweet creatures that it was the right thing to have their feet pinched, and this drew attention to the other extremity. We have not yet found anything so effectual, but there is time. The Chinese celestial civilisation is much older than ours, and it may have taken centuries to induce the ladies to choose pinching their feet as the correct competition for female excellence.

That knowledge is power is a feminine truth; it belongs to the side of nature that receives impressions. Fagge was no mere receiver of knowledge. He was a man of very great character—of very great medical character. True, great medicine is never grand. It would be absurd in the House of Lords. I know no argument for putting physicians in the House of Peers, unless it be to apply astringents to the eyes of the last conspicuous addition to the Upper House. In the House of Lords, as in the Celestial City, tears shall be wiped away from all eyes. Can you imagine a British noble ever weeping at so much a volume? No; astringents are wanted: a sponge—a big sponge—and to hold it, a big hand, even if a "big merciless hand." But Lord Tennyson himself shall describe it—

BALLADS AND OTHER POEMS, PUBLISHED DECEMBER, 1880.

IN THE CHILDREN'S HOSPITAL—EMMIE.

"Our doctor had called in another, I never had seen him before,
But he sent a chill to my heart when I saw him come in at the door;
Fresh from the surgery—schools of France and of other lands,
Harsh red hair, big voice, big chest, big merciless hands.
Wonderful cures he had done; O, yes; but they said too of him
He was happier using the knife than in trying to save the limb.
And that I can well believe, for he looked so coarse and so red,
I could think he was one of those who would break their jests on the dead.
And maybe the living dog that had loved him and fawned at his knee,
Drenched with the hellish Oorali—that ever such things at oul I be!

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And he said to me roughly, 'The lad will need little more of your care;'
'All the more need,' I told him, 'to seek the Lord Jesus in prayer.
They are all His children here, and I pray for them all as my own.'
But he turned to me: 'Ay, good woman, can prayer set a broken bone
Then he muttered half to himself, but I know that I heard him say,
'All very well, but the good Lord Jesus has had His day.'"

And is it thus that great medicine is spoken of in the House of Peers? No, peers speak and write like gentlemen. Scorn seeking scorn to scorn seems the speciality of poets. How came he to be there? Is the House of Lords the seat of the scorner? Ah! that insidious Gladstone! What could he mean by imposing the author of those scurrilous lines on the much-threatened Upper House. A few more such additions, and—— The only just all-round atonement Lord Tennyson could make would be to give the pecuniary proceeds of "In Memoriam" to that hospital which he had in mind when he penned those unspeakable lines. Was it the Evelina Hospital for Sick Children? Dr. Fagge was physician to that hospital. The amends might be made in his honour. But the subject is quite unworthy of Fagge. Fagge's greatness as a physician appeared in his always kind and sympathetic and Christian treatment of the sick poor. It is easy for poets to put their own denials of Christ into other people's mouths, and then as fashionable authors to spread them about on drawing-room tables. It is convenient to be able to work off your baser sentiments in a false character; you yourself then appear pure by contrast with your own creations. But if one's solemn everyday duty is spent face to face and eye to eye with the sorrowful and suffering poor, one wonders how even a poet laureate could be capable of thinking the matter of those loathsome lines of this new peer. I wonder is he yet ashamed of them? What footing has this poet aristocrat on any grounds of charity that justifies him in putting his blasphemous sentences into the mouth of the child he supposes? Let him go into a children's hospital, and see how far the poor sick little ones think as vilely as he of the kind-hearted doctor whose only sorrow is that his best help to his little patients too often proves ineffectual. Fagge was physician to the Evelina Hospital for Sick Children. His sympathies were not with grandeur and the House of Lords. He worked for the suffering poor, and his sympathies were with the poor. And remember it is always more difficult to get the sympathies of the poor. They are poor mainly because they do not sympathise with much that their betters enjoy. It would be a slight to medicine to suppose that this makes them, from the doctor's point of view, more easy to sympathise with. Nay, are not the poor used as the practising ground for extra strong sympathies? But, indeed, just as the Jesuits succeeded splendidly in education through perceiving that the lowest pupil wanted the best teacher, so, if you will condescend to know the truth, you must know that to succeed with the poor needs the best doctor—the most medical doctor. Fagge was, to my mind, the type of true medical greatness. Perhaps he might have been corrupted into grandeur if his life had been spared. There comes a danger of that kind of corruption after forty or forty-five, even in the greatest of truly medical characters, especially if it goes to Brook-street or to Grosvenor-street. I believe Fagge was capable of any kind of excellence, and he might have been tempted out of true medical greatness into grandeur. His greatness as a physician became evident to observers of character very soon after his brilliant student career had placed him on the staff of Guy's Hospital; he did not merely constellate already known facts, but he found new facts. Former volumes of Guy's reports contain ample and most valuable proof of Fagge's greatness as a physician. His genius of eyesight, or power of observation if you will, was sustained by immense memory, and brought into action by vivid and constant suggestiveness of intelligence. I watched Fagge closely, and knew him to be one of the most dynamic minds of the age; certainly, second to none in our profession. Let me instance one fact in his career, not because it is the most brilliant, but because it will serve best to show those points of his character which I am endeavouring to draw attention to.

In Guy's Hospital Reports for the year 1868 appeared Fagge's papers "On Certain Rare Cutaneous Affections" and "On Keloid, Scleriasis, Morphœa, and some Allied Affections." It was at once recognised that these papers were the work of no mere bookworm. True, the literary knowledge of the subject would, indeed, do the highest credit to one whose reputation was to rest on his large reading; but the paper on keloid showed that Fagge meant more than reading. Dr. Addison had, many years before, recorded some cases of keloid, and models of these cases were in the museum. The course and consequences of keloid were, however, unknown. Fagge had seen cases of this disease, and amongst them one which had been in the clinical ward eight months before his paper was written. Whilst writing his paper he visited this patient at her home, and observed that the disease was ameliorated. Hereupon, it struck Fagge that the disease might be transitory, notwithstanding its tumour-like or scar-like appearance. And to learn whether this was really so he at once proceeded to search for Addison's patients of years before, tracing them to their homes, so that, aided by the wax models, which enabled him to know their condition in Addison's time, he discovered and proved that keloid is a temporary disease, and that the affected skin, with all its unpromising appearance, is capable of recovery. When I say that he made a journey into Hampshire in order to see one of these ancient cases of Addison, it will be plain that no common obstacles were likely to prevent Fagge from advancing medical knowledge. The general effect of his work on this branch was to bring together vague and scattered groups of rare skin diseases, and to show their relations to each other, and to arrive at certain conclusions from quite sound facts cleverly lit upon and laboriously followed out; so that Fagge's conclusions may be enlarged or modified by future facts; but the cases he watched to their completion will ever remain types of sound and careful observation, real additions to our knowledge. Let anyone read the papers I am speaking of, and he cannot fail to admire their earnestness and richness in new matter, their sterling honesty and conscientious accuracy, and most unwearying pursuit of all those possibilities for further advancing the question which can be arrived at by faithful discussion of the subject; and every reader of Fagge's papers must indeed be struck, not only with his patient truthfulness as an original scientific observer, but with his literary honesty. Fagge never, in the ardour of any inquiry or in the heat of any phase of competition, forgot to listen to the conscience of an honest man and a gentleman. He was the very genius of candour and truthfulness, of truest modesty. You may read all his papers, and never once will you come across any exaggeration such as worse than falsifies half the medical work that sees the light in our press. He gave to every predecessor in the field all credit that was due. Indeed, his always generous desire to do justice often induced him to credit those he cited for a completeness of idea which in truth belonged properly to himself; so that, in the place of Harvey, I think Fagge would have credited to Cæsalpinus the whole circulation of the blood, and so have saved the labours of those who now seek to acquire for their Italian fellow-countryman a credit that does not properly belong to him.

Fagge had a great memory and great power of application and magnificent honesty, and so there was in him much that goes to make the great, if not the grand, physician; and although there was perhaps something lacking in him which you are accustomed to see in grand physicians, until you are disposed to think it to be of the very essence of medical greatness, yet, in truth, he was not only a great but a successful physician. Steadily he made his way amongst all possible competitors for true greatness, and it was already well known to his contemporaries whose reputation amongst them all would best stand the test of time. His splendid gifts made trickery unnecessary as a means of high ambition. He was such a man as vindicates the truth to nature of that unsparingly severe story known as the parable of the talents. Those less highly endowed have so much excuse for envy, that they might well think it better for their happiness to hide away their poor little natural gifts. But although we are taught that such is the usual and first temptation of very small talents, so that no usury is got from them, it is not meant that this is always the case. In some rarer instances we see the clever possessor of one talent manage to make up with borrowed capital, and so get a surprising percentage on his little talent, enabling him to appear quite rich, with all the fussiness and want of modesty that mark the *parvenu* of science; till high interest proves false security, and the little man's real capital some day disappears, and what he had is swallowed up in what he only seemed to have, and he becomes a mere phantom and a show before his fellows.

I cannot pass on without remarking upon that very curious tendency of "self" to identify itself with its acquired possessions, whether these are stores of learning or such more obviously external property as the clothes from one's tailor. It is so very curious to see how a child prides itself on its new scraps of information, identifying itself with the acquisition just as it also prides itself on its nice new frock,

and conceives itself with information, frock and all included. And so grown children identify themselves with all they have picked up in the way of knowledge just as they do with the clothes they are wearing. And how complete is this latter identification you may best imagine when after death their ghosts appear generally in these clothes. Mr. S—— recently saw the ghost of a soldier in full uniform; also, a clerk in the Bank of England saw his brother's ghost in dress clothes—truly most curious parts of a spiritual individuality; but really, when one comes to think, they are not more really foreign to the individual himself than most of the remarks which mediums can get from departed spirits, which are always very secondhand remarks, and, indeed, merely what was put into the defunct by the communications of his fellows. In fact, I do not quite know what constitutes a pure individuality such as might appear to the spiritual eye as a true self. How little of what we call ourselves is truly alive; what proves immortal will be rather what moves than what composes angelic features. But when the uniform and dress clothes and scraps of information are stripped away, it is very difficult to form a conception of what will be left. I expect not much will be left of people who have no character. But Fagge was a man of character, and his life conveys a distinct and instructive idea. His gifts were no mere traps to catch fortune. He had little of the art of taking credit for lucky strokes which make you seem, even to yourself, to know more than you really do. He had vast natural abilities, and could afford to wait and to go steadily and easily. Indeed, if there was anything lacking in his career, it was that he perhaps worked with so natural an ease that he did not put himself out to be showy enough. I am thinking of what happened one day when I was trying to buy a horse at Seymour's Repository, at the fashionable part of the West-end. The proprietor was recommending me a handsome creature with beauty and power and pace, and all that I could see desirable in a horse at only 100 guineas. When acutely observing my disappointment at the low price, he said: "Only wants a little of what we call action, sir, and he will fetch 500." This for a moment set me reflecting how much a little of what a West-end judge would call action might do for many physicians gifted with form and power and pace; and I seemed for a moment to see with the mind's eye what in the West-end we call or might call "action" in grand physicians. If Mr. Francis Galton's machinery for making compound pathological photographs could have been applied to my mind's eye, I believe it might at that moment have recorded a valuable image of "action." It is meanness to smile at it. The smile is utterly unworthy. One really ought to carry a stock of spare reverence for use as supplement on occasions when one ought to feel reverence, but cannot quite rise to the required level; for so much, after all, in very truth, depends on how we act towards each other. This interaction constitutes the inter-reality which is the reality of social life, and in a sense we are to each other no more than the impressions we make upon each other. So, at least, you might be weak enough to think if there was in the world no earnestness like the earnestness that made Fagge a great, as distinguished from a grand, physician. He was, before all things, earnest in his work. It is earnestness that makes greatness. I don't quite know what makes grandeur; it is too subtle for my coarse analysis. But without earnestness there is no true greatness. In vain you try to lead a party with quips and sneers. The vulgarest Bummagem earnestness will push you aside. Earnestness taketh by force in the very kingdom of Heaven; and Fagge was before all things an intensely earnest man; and the earnest attaches to the real and moves the real, and whatever Fagge brought forward had a solid reality, which made it useful matter for all concerned. Few medical writers of his age are more frequently quoted, either in his own country or throughout Europe and America. Whoever had Dr. Fagge's facts to support him was sure at least of that part of his ground. His papers on "Intestinal Obstruction," on "Diseases of the Liver and Peritoneum," on "Croup and Diphtheria," and on "Diseases of the Heart" may be instanced as examples to show the scale on which he gathered together facts as raw material from which either he himself or others following him might reach new and sound steps in advance. Fagge's earnestness as a physician made him bold and original in therapeutics. He was too much imbued with the healing spirit to stand by and see his patients die in accordance with pathology. One of his papers in the reports will show his readiness to initiate bold measures on his own responsibility. In a paper on "Diabetic Coma" Dr. Fagge describes the relief that followed when he injected warm saline fluid into the veins of a person comatose with diabetes. The patient returned to consciousness, and remained sensible until it was judged right to give him some codeia, when he again became insensible and could not be aroused. Dr. Fagge was not hesitative or feeble in therapeutics. But I believe I do his memory no wrong in saying that he never exhibited any enthusiasm for the elaborately theoretical treatment of outlying and superficial symptoms. He did not belong to those who weave interminable accounts of tiresome doubtful details upon the effects of drugs that might possibly be of some good in chorea, if only the remedies for chorea happened to be the same as the remedies for wriggling, which, in the meantime, we know they are not. But Fagge tried honestly his best to relieve his patients with effectual remedies. He was not by any means the man to treat clinical medicine in a spirit of scientific despair, as is the manner of some who teach it so that meaner minds will obtain the despair without the science. He was always ready in the invention of new measures of treatment. Those who write originally on therapeutics may be divided into: (1) Those who love relieving the sick; (2) those who are set upon the laws of action of the drug; and (3) those who wish to push some new remedy for the sake of a name. Of course, all these motives may be blended together in various proportions, but it is generally pretty evident which of them constitutes the true actuating power. Fagge, in his therapeutical teaching, like a true physician, was always plainly actuated by the first and purest of these motives. I will not speak in disrespect of the second kind of motive. Dr. Fagge did good work in this direction. The paper which he, with Dr. Stevenson, wrote on the action of digitaline[2] was no mean contribution to the then existing knowledge of a most important subject. No doubt it is necessary that the doctor should have a clear conception of the range and measure of power belonging to each of the drugs he uses, just as he should have a clear conception of the extent and character of the diseased changes which he means his remedy to reach and combat. And one must not think slightingly of any sound work done seriously and earnestly to measure the size and form of a remedy any more than we think slightingly of pathological work done to estimate the depth and characters of particular diseases. There is something absurd, but for its obvious danger, in throwing drugs of imperfectly known power after diseases whose nature is as little recognisable. Mr. Mill smiled at another philosopher for describing digging as the insertion of the idea of a spade into the idea of the ground. But in much of our treatment do doubt the idea of the remedy is inserted into the idea of the disease when nothing really exists corresponding to the ideas with which we suppose ourselves to be acting. Of course I here speak of treatment as distinguished from cure in the line of distinction so well drawn by that able physician, the late Dr. Peter Latham. When we have a known cure for a known disease we use the cure whenever we meet the disease, and there are no ideas worth speaking of in the whole matter. But when there is no known cure for a disease, we have to form an idea of the disease, and meet it with the idea of a remedy. And although this proceeding is not, as a rule, very satisfactory, yet we have no right to think trivially of a branch of inquiry which tries to give us more definite ideas of the powers of our remedies. Dr. Fagge's work on Digitalis was a good example of the best sort of this kind of work. He was young when he carried it out, and this branch of activity was not followed up by him. The distinction which Dr. Latham drew between cure and treatment is in a half-conscious way recognised by the public. When you can cure the patient he approves of you, and says you know his complaint. When you know no cure for him, but proceed to treat him, he is apt to call that being experimented upon, and to put on an air of doubt and resentment. The public watch jealously all experimental treatment. The justification of it is a matter of conscience, and the public is always ready to impose its conscience on private individuals. Yet the physician is expected to heal. His place at the point of contact between nature and human nature is a delicate and difficult one; and compelled as he is to study nature for the corporeal good of humanity, he must not too sorely try its spiritual side—that spiritual side of humanity which we always hope may prevail as the most

[2] Proceedings of the Royal Society.

truly human element in our compound nature. Instinctively mankind feels at one with all living things. The love which the world has for science is cold compared with the love with which humanity loves nature—the visible, audible, sensible world; the world of taste and touch which we call nature. It is a beautiful name; it was invented long ago in some golden age; nature, the growing, in such contrast with fabric of all kinds; the sensuous presence of this world in which we live, and out of which we die; the consciousness of which constitutes life to each of us; nature, which we try to analyse in science and to imitate in art, but which ever escapes our analysis and distances all imitation. The clever chemist will take a natural object, say a feather, to find out what it *is*, and he will burn it under certain conditions and collect the results, and measure and weigh, and end by getting the feather into things he supposes he knows better, which he calls carbon, oxygen, nitrogen, and hydrogen. The very special feather has reached its place in his very general generalities; but of the nature of the feather whereby it had its shape for the eye and its resistance to the touch, and its resiliency and all else that makes up feather-nature, if you ask the chemist for this he will bluntly accuse you of metaphysics, which in five-sense science is a heresy. The clever artist, on his part, will paint with lilac paint to represent the distant hills, and will grow so sure that his lilac paint is like the distant hills that he will almost think the distant hills are like his lilac paint; until he never again will see the distant hills as they are, but only as he paints them. Nature, who yields so little to analysis and is so far above imitation, is one with us all in this life of ours, and waits always at our senses full of instruction, which is not mere science, and of beauty which defies all art. And the mode in which we are influenced by sensuous nature constitutes in each of us his character. Your character is what you are and feel amongst the things of the world and amongst men as things. True, a generation is rising in Board Schools in great cities, which in place of natural character will have what? Well, what? I don't know. Nature seems likely to be hidden under brickfields and dustheaps, and character to be lost in science limited by art—in secondhand science limited by secondhand art. What will the future of it all be? Mr. Matthew Arnold, his lips touched from Isaiah as Isaiah's lips were touched from the altar, gives a prophecy, a secondhand prophecy, and says: "There will be a remnant." Well, if so, the remnant will be those who, like Fagge, have character which makes them work real work amongst the realities of their actual calling; those who live as real natural live human beings, and not mere phantoms of science and art. For what is this life of ours out of which Fagge is gone? And what this individuality which places us in it, if not some sort of shadow cast in some sort of light; the cause of which shadow being removed, we shall all be one in the light?

"Bradshawe" Lecture

ON THE

PATHOLOGICAL RELATIONS OF THE ABSORBENT SYSTEM.

Delivered before the Royal College of Physicians of London, August 18th, 1884,

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(*Concluded from p. 311.*)

THE lymphatic vessels are subject to two principal classes of tubal changes—namely, dilatation and hypertrophy, and obstruction. Dilatation may affect the capillary network of the lymphatics; more commonly the larger trunks; or occasionally the thoracic duct or the receptaculum chyli. It presents various degrees and assumes different forms. Thus there may be merely a localised reticular dilatation of the lymphatic capillaries; or more frequently varicose, saccular, tubular, fusiform, or cirsoid dilatation of the trunks; or the enlarged vessels may form a distinct growth, named lymphangioma or lymphangiectodes, which has been divided by Wagner into the three varieties, simple, cavernous, and cystoid, in which cysts are developed. Moreover, enlarged lymphatics constitute an important element in the structure of elephantiasis and other growths, especially elephantiasis lymphangiectodes. The thoracic duct and receptaculum chyli may be enormously dilated, the former in extreme cases reaching the size of the little finger, or even attaining larger dimensions than this. The deep lymphatics and the lacteals are liable to dilatation, as well as those on the surface. Lymphangiectasis is in many cases congenital, and it has been supposed that this may be due to the want of specialisation in the lymphatic system of certain parts. The condition is attributed to different causes. Thus it may follow lymphangitis, in consequence of which the larger tubes are blocked, and the afferent vessels therefore become dilated. In other cases it is not preceded by marked inflammation of the lymphatics, but there is considerable hypertrophy of the cellular tissue, and the vessels enlarge, forming a very free anastomosing network. Again, it is supposed that dilatation may arise from nerve hypertrophy of the lymphatic plexuses, or from paralysis of the coats of the vessels. Any obstruction from internal plugging or external pressure may lead to enlargement of the vessels, the circulation through which is thus impeded; and probably the obstruction may be occasionally seated in the glands. Lymphatic dilatation is most frequently met with in warm and moist climates. When lymphangiectasis occurs on the surface of the body, it can be recognised by objective examination. Dilatation of the superficial lymphatics is generally observed on the inner side of the thigh, the sides of the abdomen, the scrotum, and the penis. It is characterised by vesicles like grains of sago, grouped irregularly (Curnow). Sometimes only ampullæ are formed, which are generally soft and painless. The vessels may rupture subcutaneously, forming vesicles containing a clear or milky fluid. They are also liable to rupture externally, or into various internal parts when situated internally, and it is only thus that the latter can be at all recognised clinically, the escaped chyle or lymph appearing in the fæces or urine. Even superficial dilatation of the lymphatics has been not uncommonly mistaken for other conditions, such as herniæ, abscesses, and strumous enlargement. The discharge of lymph confirms the diagnosis. If inflammation attacks dilated lymphatics, it tends to spread rapidly, and may prove fatal.

Multiple lymphatic nævi of the skin, a newly observed disease of the lymphatics, has been recently described by Hoggan. The condition is believed to be not uncommon, quite as frequent perhaps as venous nævi, which it often accompanies and complicates. It also forms the initial stage or predisposing pathological condition of other diseases, such as lymphatic varix of the larger vessels, and also of elephantiasis, in the production of which it may often be the most important factor. That this has not been observed before is probably due to the fact that no proper histological examination, as apart from microscopical, has been made of the tissues in the initial stages of the diseases. That the condition has not been recognised clinically is probably due to the want of colour in such nævi, as compared with venous nævi. But there can be little doubt, from the frequency with which venous nævi have been observed in elephantiasis, that the two conditions of venous and lymphatic nævi are generally coexistent, and that conditions of hypertrophy, due really to the latter form, have, through being unrecognised, been erroneously ascribed to the former. On the other hand, when the lymphatic nævi were small, and placed so superficially in the skin that distension by lymph, produced at will, made them appear above the general surface, like vesicular papules, such a condition would almost certainly have been described as "varicose lymphatics."[1]

The absorbent vessels may become obstructed. This condition may involve the lymphatic capillaries, their main trunks, or the thoracic duct itself. It may result from the blocking up of their channels by coagulated lymph, from inflammation of the walls of the vessels, or from external pressure. Thus the thoracic duct may be more or less obstructed, or even completely obliterated, by the pressure of enlarged glands in the thorax, or of an aneurysm. The lymphatic trunks in the limbs may also be compressed by glands, aneurysms, and other morbid conditions; and also the capillaries are subject to pressure in consequence of inflammation of the surrounding cellular tissue. Obstruc-

[1] Hoggan: Journal of Anatomy and Physiology, April, 1844, p. 304.

tion of the thoracic duct is said to arise from disease of its valves. It may be remarked, further, that a certain degree of obstruction to the flow of the lymph and chyle may arise from marked interference with the venous circulation, as the result of cardiac disease or direct obstruction of the principal veins. If the thoracic duct be obstructed, and if the chyle cannot reach the venous system by the establishment of a collateral circulation, grave general symptoms arise—namely, marked wasting and anæmia, tending towards a fatal issue. Various degrees of obstruction of this channel have, however, been found in several cases at post-mortem examinations, in which no symptoms had been observed during life. The most obvious direct effects of obstruction in the absorbents are dilatation of the vessels behind the impediment, in the course of the circulation, and the development of lymphatic œdema. These conditions necessarily vary much in their extent and degree, according to the situation and character of the obstruction. The dilatation may ultimately lead to rupture of the vessels.

When lymph or chyle is discharged from the vessels or glands, either on the surface of the body or into some internal part, the amount varying much in different cases, the term lymphorrhagia or lymphorrhœa is applied in signification of the condition. Lymphorrhagia has been observed as a consequence of a wound, but more commonly of engorgement from closure of the lumen of the duct by inflammation or a tumour. In rare cases it may occur from slight wounds, especially in the neighbourhood of joints, which is probably due to a constitutional defect, a lymphorrhagic diathesis corresponding to the hæmorrhagic diathesis (Bradley). Usually traumatic lymphorrhagia results from wounds of the thoracic duct, of the larger lymphatic trunks, or of the glands. Idiopathic lymphorrhagia is generally due to previous dilatation of the vessels, which ultimately give way. A most interesting case has been reported by Cayley, in which the receptaculum chyli gave way spontaneously as the result of previous extreme dilatation, and fatal peritonitis ensued.[2] Lymphorrhagia may be associated with chyluria, and is then believed to be due to the filaria sanguinis hominis. When lymphorrhagia occurs on the surface of the body, the discharge of the lymph is the clinical sign of the condition. The amount of fluid which escapes varies considerably, ranging from one ounce to five or even ten pounds during the twenty-four hours. It also differs at different times, and the flow has been known to assume a periodic character, increasing during digestion. The fluid which escapes after injury may be clear and limpid lymph, or mixed with inflammatory products or blood. That which comes away in cases of rupture from dilatation of the vessels is more or less white and milky, like chyle, and it contains a variable quantity of fat. The quantity of fibrin present varies much, and therefore the power of spontaneous coagulation of the fluid. When lymphorrhagia takes place internally, it can only be recognised by the presence of the fluid in the urine or fæces respectively—in the former case giving rise to chyluria, and in the latter to fatty stools. Bradley directed attention to the probable origin of certain cases of hydrocele, hydrocephalus, pleuritic effusion, and ascites from a lymphorrhagia into the respective serous cavities. As proved by Cayley's case, the escape of chyle into the peritoneum may set up fatal inflammation. The general condition is more or less affected in cases of lymphorrhagia in proportion to the amount of fluid lost.[3]

The consideration of inflammation of the lymphatic system would now appear to be appropriate. Acute inflammation presents three varieties—namely, where the vessels are alone affected, lymphangitis or angeioleucitis; where the condition is limited to the glands, adenitis; or where both vessels and glands are involved. It will be convenient to consider these varieties together. As a rule the disease is localised, but under certain circumstances the absorbent system is more or less widely implicated, especially if the inflammation be of a septic character. It may be set up and extend with great rapidity.

This class of affections may be of traumatic origin, being due to various forms of injury, such as a wound, contusion, or strain; or they result from various kinds of irritation, such as that produced by neighbouring inflammation, suppuration, ulceration, or diseases of joints or bones. The implication of the glands under the jaw, in cases of diphtheria and scarlatina, is a familiar illustration of irritation from within. External irritation, as, for instance, the strong heat of the sun, may induce superficial lymphangitis. Special forms of inflammation of the absorbent system are set up by specific kinds of irritation, such as that of the syphilitic virus, and septic forms of the disease are induced by various septic poisons. The lymphatics connected with the internal organs are often inflamed when these are the seat of any irritation. Pus has been found in the neighbouring lymphatics in cases of purulent pleurisy. Some forms of pelvic cellulitis have also been regarded as being due to lymphangitis. Inflammation may be immediately excited in the vessels and then travel along to the glands; or the irritation may be conveyed by the current of lymph to a more or less distant part, the intervening portion being unaffected, or the glands may be implicated by extension from the surrounding tissue. When a gland is involved while the vessels between it and the source of the irritation are unaffected, the inflammation is said to be sympathetic. Inflammation is much more readily excited in the lymphatic structures in some persons than in others, and especially in those who are of a strumous habit. The glands are more liable to be affected in the early periods of life. A low state of health may predispose to inflammation of these structures from slight causes.

Lymphangitis is distinguished as reticular or tubular, according as the fine capillary network or the trunks of the vessels are involved. In the former case the skin and its capillaries are usually implicated. In the latter variety the vessels become dilated and their walls are thickened, the endothelium often disappears, and the internal coat becomes opaque and uneven. The lymph coagulates in their interior, blocking up their channels, and the clot may become organised, obliterating the vessels permanently, or occasionally it softens and suppurates in the centre, and the pus may find its way into the circulation, leading to septicæmia or pyæmia. Exudation also takes place, while the surrounding cellular tissue undergoes hyperplasia and becomes thickened. Lymphangitis may lead to inflammation in joints, which may be of a purulent character. In adenitis the affected glands become congested and swollen, as well as the seat of exudation, while the passage of the lymph through them is impeded. Resolution may take place after a time, but not uncommonly the inflammation terminates in suppuration, this beginning in the centre, the cavities of the glands becoming filled with pus, and the surrounding cellular tissue being also involved. In other cases the glands remain more or less indurated, and they may form adhesions to the surrounding structures, especially if the irritation is repeated several times. Glands which are chronically enlarged, as the result of inflammation, are very liable to become the seat of acute inflammation from slight causes. They may subsequently suppurate or undergo a caseous degenerative change, but often remain unaltered for a considerable time. This condition of the glands interferes with the passage of the lymph through them.

When the superficial lymphatic vessels or glands are inflamed, this condition is evidenced by objective signs. Lymphangitis is indicated by wavy or straight lines, running towards the glands, or sometimes there are isolated red patches, the skin and its capillaries being involved along with the lymphatics. The large vessels may be felt as firm and knotted cords. If the glands are affected, these can be felt, and are seen to be more or less enlarged and swollen, at first feeling firm. At the same time pain is experienced, often very acute, with sensations of heat, stiffness, and tenderness. When the affected structures are deeply situated there are no red lines, and redness is not always present. There is induration of the part, more like that of œdema than inflammation. The inflammation may, however, pass through the intervening tissues from the deep to the superficial lymphatics, and *vice versâ*. Owing to the interference with the passage of the lymph more or less swelling from lymphatic œdema is often present, of a firm character, and a limb may be much enlarged from this cause. If suppuration should take place in the glands, this will be evidenced by the ordinary signs characteristic of an abscess. There is more or less pyrexia, in proportion to the extent and intensity of the inflammation. In septic forms of lymphangitis signs of general septicæmia are likely to arise.[4]

In reference to the morbid conditions of the lymphatic glands, manifested by enlargement, if we have regard to the anatomical characters, there are at least three which it is

[2] Pathological Transactions, vol. xvii., p. 163.
[3] Roberts' Medicine, p. 765.

[4] Quain's Dictionary of Medicine, vol. i., p. 967.

extremely difficult, and often impossible, to distinguish from one another. These are simple inflammatory hyperplasia (lymphoma), the so-called scrofulous form of enlargement, and that morbid condition now generally known as lymph-adenoma.

Lymphoma is a comprehensive term, and includes formations which are not strictly tumours, but rather hyperplasias of the tissue proper to lymphatic glands, lymphadenoid, or, briefly, adenoid tissue, as it is called. Lymphoma as a neoplasm would imply the development and deposit of new adenoid tissue in the form of a tumour within a lymphatic gland or follicle, or some other structure of the connective tissue group. In what is usually called lymphoma this does not happen. What does happen is that the tissue of the lymphatic gland or follicle increases in size because the lymphoid cells it contains are multiplied, while the reticular tissue undergoes hyperplasia. The process is often inflammatory in character; in other cases the lymphoid hyperplasia seems to begin idiopathically—that is, without any cause hitherto discovered. It may often be doubtful whether the increased growth of a lymphatic gland should be regarded as neoplastic or as hyperplastic. Many cases of lymphoma, especially the leukæmic kinds, seem referable to hyperplasia. The lymphatic glands, adenoid structures of the intestine, and lymphoid follicles of the spleen, all maintain their structure as they grow in size, or alter but slightly. Moreover, the functions of the glands seem to be more actively performed. This does not seem to indicate that they are invaded by anything of the nature of a neoplasm.

In addition to the hyperplastic lymphomata, there is a true or heteroplastic tumour, whose structure agrees with that of lymphadenoid tissue. As the term lymphoma has been perverted to describe the hyperplastic formations, we may do well to distinguish the genuine tumour as lymph-adenoma or lympho-sarcoma. It is a sarcoma whose structure somewhat resembles that a of a lymphatic gland. It most commonly originates in lymphatic glands, and in the adenoid tissues of the mucous membranes; it may, however, arise elsewhere. When it attacks a lymphatic gland it may be distinguished from mere hyperplastic lymphoma by its rapid growth, and by its tendency to overpass the limits of the gland and to form metastases.[5]

The term scrofulous is commonly applied to the slow and painless enlargement of groups of lymphatic glands, which occur for the most part in children, and almost invariably ends in the destruction of the glands by an imperfect kind of suppuration. Scrofulous glands are generally met with in either the neck, thorax, or abdomen, and are commonly limited to one of these regions. Indeed, in the neck, where their progress can best be followed, we often see that the enlargement commences in one gland only; that the glands in the vicinity are successively affected, and often at long intervals; and that after a while the morbid process ceases with the destruction of all the implicated glands, those on the opposite side of the neck possibly remaining all the time perfectly healthy. In the earlier stages of the affection the glands differ little, either to the naked eye or under the microscope, from such as are simply hyperplastic from inflammation, but they tend soon to become opaque, yellow, and friable, and to undergo caseous degeneration. This change commences in the central parts, and gradually involves the whole mass, which presently breaks down into a semi-fluid detritus. Occasionally the caseous swelling dries up, earthy salts are deposited in it, and it becomes an inert earthy concretion. There is a good deal of vagueness in the sense in which the term "scrofulous" is generally employed. It is taken for the most part to imply that the morbid process to which we attach it is dependent upon some peculiar condition of the constitution, and, further, that there is some close affinity, if not actual identity, between it and tubercle. But the so-called scrofulous glands are certainly not tubercular, and although their appearance is sometimes followed by that of tubercle, in a very large number of cases no such sequence is observed. As regards cachexia, it is certain that scrofulous glands often develop in persons who appear in all other respects in the best of health; and, furthur, if we may judge of the limitation of the morbid process, that if we admit their dependence on a pre-existing state of cachexia, that cachexia must in many cases be limited to a definite part or district of the organism. It is well known, moreover, that when a single gland has undergone scrofulous proliferation there is a remarkable tendency for the morbid process to spread thence to other glands in its immediate neighbourhood, and thence again to others; it seems in fact to spread from gland to gland, through the agency of some infective material, which the diseased organs evolve. It is well known, also, that scrofulous enlargement of the glands of the neck not unfrequently follows upon certain diseases affecting the throat—such as parotitis, diphtheria, and scarlatina. Now, basing his arguments upon such facts as these, Virchow maintains, and I think with reason, that scrofulous proliferation of the lymphatic glands, like ordinary inflammatory hyperplasia of the same organs, is always secondary to some peculiar process going on at the mucous surface or other part which is in direct relation with them by means of the lymphatic vessels; that scrofulous disease of the glands of the neck is traceable to some inflammatory condition of the throat, fauces, or contiguous parts—of the bronchial and mediastinal glands, to pulmonary or bronchial inflammations, and of the mesenteric and retro-peritoneal glands, to similar conditions of the alimentary canal. He considers that there may be some specific quality or element in the primary inflammation, and a tendency in its products to undergo rapid decay similar to that which characterises the morbid products of the diseased lymphatic glands, but that generally they are not recognisable, from the fact that in this case the cells are mostly developed at a free mucous surface, and are speedily shed from it. But he considers, further, that there may be some special aptitude or weakness, congenital or acquired, in the lymphatic glands of certain persons, or of certain parts of them, which makes their inflammations, induced by indifferent causes, assume the scrofulous character.[6]

In contradistinction to the scrofulous enlargement, tuberculous lymphadenitis may be mentioned. It attacks certain parts of the lymphatic system rather than others, especially those through which the lymph is as it were filtered—namely, the lymphatic glands. It is in the glands that the tuberculous eruption is most intense. Generally the process makes a kind of halt at these gland stations, but it sooner or later finds opportunity to spread onwards, and at length reaches the main trunks and the thoracic duct itself. Wherever the tuberculous process has become established, it is distinguished by the development of tubercles, and this in the lymphatic vessels as well as the glands. A more or less intense inflammation of the surrounding tissue is always associated with the tubercular eruption; it is manifested by hyperæmia with infiltration and swelling. If the process lasts for a certain time, it not unfrequently happens that young connective tissue is developed at the seat of eruption. The usual fate of the tuberculous growth is caseous necrosis, and disintegration. It rarely issues in the formation of fibrous tissue, and still more rarely in complete resorption of the tubercle. The virus which engenders tubercle may be carried out of the lymphatic system into the blood, either from a tuberculous focus in a gland or a tuberculous ulcer in the thoracic duct. It may thus be conveyed to distant organs.

In the morbid condition known as lymphadenoma the enlargement of the lymphatic glands consists at first of mere hyperplasia, and subsequently of fibroid induration. It varies much in its extent. A few glands only may suffer, or every gland in the body may be enlarged. The former cases have the character of a local growth, the latter is distinctly a general disease, for which the term "lymphadenosis" seems the most exact. The glands vary in consistence; when soft, there may be a considerable excess of leucocytes in the blood; when hard, there may be simple anæmia. Microscopic examination reveals that the enlargement is due to hypertrophy of the glandular tissue, the whole structure being converted gradually into lymph cells, with a fine network of cellular tissue. In addition to the hypertrophy of the glands, other organs in course of time present growths of a similar nature, especially the spleen, and less commonly the liver, lungs, kidneys, and alimentary canal. Even the canals of the bones may be filled with lymphoid cells. Very little is positively known as to the etiology and pathology of the condition; but it is assumed that it is a primary affection of the lymphatic system, depending upon some special constitutional condition or diathesis, named lymphadenosis. By some pathologists it is regarded as malignant, and is placed by Wilks between cancer and tubercle. In many cases the disease seems to begin without any obvious cause, but in

[5] Zeigler: Macalister's translation, vol. i., p. 216.

[6] Bristowe's Medicine, p. 62.

others it evidently starts from some local irritation, and such irritation has probably been present in other instances where it has been too slight to attract attention. As regards predisposing causes, the disease is most common in early and late adult life, in males, and amongst the poor, its development being aided by bad food, insufficient clothing, cold, and damp, and unfavourable hygienic conditions. When the affected glands are superficial, their enlargement is evident on objective examination, and their extension and growth can be observed. In the large majority of cases there is neither pain nor tenderness, but if the enlargement is very acute and rapid, sharp shooting pains may be complained of. When situated in internal cavities, the existence of lymphadenomatous growths can generally be made out by physical examination. Some of the most important symptoms result from pressure and irritation by the enlarged glands, these necessarily varying according to their position and their relation to adjoining structures. Obstructive dyspnœa is often a marked symptom when the growth is situated within the chest. Along with the local signs of the disease, the constitution is obviously affected as a rule. This may occur before any local symptoms appear, but usually the general symptoms are gradually developed as the glands progressively enlarge, including emaciation, anæmia, and its attendant phenomena, often combined with an appearance of serious illness, marked muscular weakness, the patient often tottering and trembling, and feeble circulation. More or less pyrexia is present in most cases, especially in young patients. Free perspirations are common, and the skin is pale and usually moist. Œdema of the legs is a frequent symptom. The blood does not present any excess of white corpuscles, but is often very watery and wanting in its normal colour, the red corpuscles being markedly deficient. The patient is much depressed and low spirited, and attacks of syncope are not uncommon. Bronzing of the skin arises from enlarged retro-peritoneal glands surrounding and compressing the solar plexus. Unless death should occur from the local effects of the enlarged glands, the course of the disease is generally chronic and progressive. In most cases death occurs within two years, either from gradual asthenia and exhaustion, from the effects of pressure, rarely from hæmorrhage, owing to perforation of a bloodvessel, or from some intercurrent complication, such as pneumonia, pleurisy, erysipelas, or kidney degeneration.

Hard lymphadenoma or lympho-sarcoma occurs as a primary growth most frequently in the superficial lymphatic glands. Other groups may be attacked in the further course of the affection. For example, if the affection start in some of the cervical glands, the rest of the cervical glands and the thoracic and abdominal glands lying near the large vessels are attacked in succession. The glands are transformed into firm, tough, elastic, or hardened knots, forming dense clusters in combination. Single glands may reach the size of a walnut. On microscopic examination the lymphadenoid structure is seen to be preserved, while the cells are increased in number and the reticulum is thickened. Fatty degeneration, calcification, or softening rarely supervenes. In later stages the follicles of the spleen may be affected, and be changed, like the glands, into hard nodules. The spleen is never primarily affected in this form of lymphadenoma.

Sarcoma of the lymphatic glands is a somewhat uncommon affection. It occurs in single glands, or several of the same group are simultaneously affected and cohere into a nodular tumour. It often overpasses the limits of the gland and invades the adjoining tissues. Secondary growths are usually developed; small round-celled sarcoma, spindle-celled sarcoma, fibro-sarcoma, and alveolar sarcoma, or alveolar angio-sarcoma are all forms which occur. All the forms of tumour which give rise to mestastases may affect the lymphatic glands. Cancers especially are apt to do so, and the glands become enlarged and altered as the disease advances. Sarcomatous metastases, like the carcinomatous, may originate in sarcoma cells which have entered the gland through the lymphatic vessels.

THE following lecture demonstrations will be given in the Hygienic Laboratory of the International Health Exhibition, during the forthcoming week, by Mr. C. Cassal, F.I.C., F.C.S.: Sept. 2nd, Arsenic in Wall Papers and articles of Clothing; Sept. 3rd, Drinking Water; Sept. 5th, Common Food Adulterations. The lectures will commence at 4 P.M.

ON A

CASE OF PISTOL-SHOT WOUND OF THE CEREBELLUM.[1]

BY WILLIAM THOMSON, M.A., F.R.C.S.,
SURGEON TO THE RICHMOND HOSPITAL, DUBLIN; GENERAL SECRETARY TO THE ACADEMY OF MEDICINE, IRELAND.

ON Nov. 26th, 1882, I was asked by the authorities to assist Dr. Egan in making a post-mortem examination on the body of a detective officer, who had been shot on the previous evening during an attempt by him and his comrades to arrest a number of suspected men. He was carried to a neighbouring hospital, and being then dead, the body was transferred to the morgue, where the autopsy was held on the 27th. On external examination a small round wound was found in the occipital region, about an inch to the right of, and an inch below, the occipital protuberance. There was no mark of powder on the scalp, or anything to indicate that the shot had been delivered at close quarters. On reflecting the scalp, and thus exposing the aperture in the bone, I found a piece of lead upon the right margin of this opening, and tolerably firmly fixed to the bone. For the time, this was left *in situ*. The calvaria was then removed. This was a very difficult operation, because the dura mater was closely adherent, and a great deal of laceration of this membrane was unavoidable. Between the dura mater and the right parietal bone was a considerable effusion of blood, showing some wound of a meningeal vessel. The brain was next removed and inspected. Corresponding to the wound in the occipital bone, the right lobe of the cerebellum was pulpy and disintegrated for a depth of half an inch. Some small fragments of bone and lead were found in the débris. The portion of lead referred to as attached to the occipital bone was examined, and was found to consist of the anterior half of a revolver bullet. The apex was directed towards the right and slightly upwards, the base was oblique and had evidently been thus cut and shaped by the edge of the bone. The bullet had apparently impinged upon the part at a very acute angle, had crushed in the bone, and in its onward course had met with the sharp margin of the hole so made and been divided upon the right edge where it was found. The remainder of the bullet was not found at this time. The cerebellum was carefully sliced, then the right hemisphere, but no trace of the missing portion could be found in either of these parts. The left hemisphere was then examined from above downwards, slices being made as before, and it was only on coming to the inferior part of the anterior lobe of the left hemisphere that the edge of the knife struck upon a piece of lead. This proved to be the remainder or basal portion of the bullet. It was embedded in the superficial part of the brain substance, to about its own depth, with the base directed inwards, and the cut surface, which corresponded to that already described in the other portion, directed outwards. The question arose how the fragment got there, having entered on the right side of the occipital bone, and a careful examination of the sections of brain was made, but no track of a passage through the substance of the organ could be found. A second wound was found on the left arm a little above and between the olecranon process and the internal condyle. This was traced upwards to the armpit, and a bullet was found lying behind the pectoralis major as it forms the anterior boundary of the axilla. A contusion on the left forearm was the only other mark of violence.

The point of surgical interest in this case, thus far, is as to the course of the basal fragment of the bullet found embedded in the brain. I have stated that there was no trace of a track through the organ by which the bullet could have passed; and we are therefore driven to the conclusion that the fragment moved round the inner surface of the vault of the skull, between the dura mater and the bone, until it was stopped where I found it. The adhesions of the dura mater rendered laceration unavoidable, and I was therefore unable to determine any openings made by the bullet in that membrane. But the effusion of blood under the right parietal bone showed that some rupturing force had been introduced there, and there was in addition a very distinct

[1] Read in the Surgical Section of the Academy of Medicine, Ireland, February 5th, 1884.

lead patch, on the inner surface of the same bone, showing that lead had traversed that region. We are all aware of the fact that bullets are very easily deflected from their course, and that they especially adapt themselves to curved surfaces, if, with a certain velocity, there is present a sufficient restraining or directing material even so soft and pliable as muscle. Here the course of the bullet was from left to right, and the division of it took place when it struck upon the right margin of the bone wound. The anterior portion remained adherent there; the basal portion was deflected inwards, but continuing its course with diminished velocity dissected its way, so to speak, between the dura mater and the bone, to the position in which it was found. This is a very remarkable occurrence, and it is especially so when we remember that the sinuses which had to be crossed in the course escaped uninjured. That it is possible, however, is quite clear. Dr. Thomas Little has directed my attention to a case of a somewhat similar character, and as it is the only one that I have been able to find I may refer to it here. Baron Larrey reports that a soldier was struck in the middle of the forehead by a ball which penetrated the os frontis and then passed obliquely backwards between the skull and the dura mater, in the course of the longitudinal sinus, as far as the lambdoidal suture, where it stopped. Larrey traced the situation of the ball by the introduction of a gum elastic catheter into the opening; and measuring the distance between the fracture and the place where he felt the ball, he cut down upon that part of the skull beneath which he concluded that the ball was lodged. The bone was then perforated with a large trepan, a good deal of pus was discharged, the ball was extracted, and the patient recovered.[2] This bears out very strongly the view I have taken as to the course of the bullet in this case. It has been suggested that the bullet did traverse the brain substance and that the track had closed; but, as I have said, careful search was made for any trace of a passage through the organ, and none could be found. There would at all events have been some sign of contusion shown by small effusions from the torn vessels, but not even this was discoverable. The original course of the bullet was also undoubtedly from left to right and somewhat upwards, as was shown by passing a catheter into the wound before any incisions were made, and by the position of the anterior portion of the bullet when found. It is unnecessary to adopt such a theory as I have just referred to, when we have sufficient data to show that the course here described was not only possible, but that the facts before us prove the bullet to have taken the direction I have indicated.

But more important than the surgical are the medico-legal questions which arise in this case. In order to make these intelligible, I may shortly mention the circumstances under which the wound was inflicted. A number of detectives were anxious to follow a body of men whom they suspected. The officers were on the right hand footpath, the suspects on the left. They were both proceeding in the same direction. The detectives crossed the street obliquely towards the other men, and when the former were still in the carriage way, one of the persons followed turned round, stepped into the channel, and facing the first detective, but standing at the left side of the officer as he advanced, fired. At the moment that this took place it was sworn that the deceased, still moving onwards, had turned his head to the right in order to extract a revolver from his side-pocket, where it had been caught in his effort to draw it. But it was further sworn that after this first shot the deceased advanced upon his assailant, and fell upon him, both going to the ground. There was much firing then, and the prisoner was struck twice.

Now, the first difficulty in the case arose from the fact that the prisoner's revolver had only one discharged cartridge, while I found two bullets in the body. One therefore must have come from the police, or from one of the companions of the prisoner. It was stated that there was general firing on both sides, and therefore the second wound may have been inflicted by either party, but certainly not by the prisoner. A comparison of the bullets might determine this question, but unless we had all the revolvers fired against the police for comparison it would be impossible to say whence the second bullet came. We have, however, nothing to do with that matter here. I may only mention, in order to make the narrative complete, that the man was then arrested, and although committed for murder, was only tried on the minor charge of firing a loaded weapon at the officer, and was convicted. The authorities had, from a comparison of the bullets, satisfied themselves that the fatal shot was not fired by the prisoner. We will suppose, however, that in this case both the bullets were of the same size and marking. The question would then arise, Which wound was inflicted by the person charged, who only fired one shot? The discussion of this point may be taken under three heads: 1. Could a person in the position of the prisoner have inflicted the wound on the back of the head? 2. If the wound in the cerebellum had been first inflicted, could the person so injured have made any advance? 3. Is a wound of the cerebellum necessarily an immediately fatal injury?

1. The answer to the first question cannot of course be quite satisfactory. In a struggle like this men are naturally excited, and the relative positions of two persons, as told by others also engaged in the affray, has always to be accepted with some modification due to the circumstances. But there appears to me to be no doubt that a wound such as this could be inflicted by one person upon another advancing towards him in the positions which have been described. The assailant was to the left front of the detective, who, it was sworn, had to turn his head well round to his right, in order to see what impediment there was to the removal of his pistol from his side-pocket. If you place persons in similar positions you will see how much of the back of the head is exposed to the individual standing on the left front. In this case the wound passed from the left slightly upwards and to the right, making a very small angle with the surface at the point of impact—in fact, if the head had been thrown forward half an inch the deceased officer would have escaped, or at worst have received a scalp wound. At the same time, however, there are other sufficient explanations of this injury, one of which is that it might have been inflicted while the man lay on the ground, back up, and with his face in the struggle turned somewhat to the left. Here a bullet coming from a person firing at either detective or prisoner as they lay on the ground might have produced the same results, and shown the same course.

2. If the wound in the cerebellum had been first inflicted, could the person so injured have made any advance? This is a question of the greatest importance, because in this case it was proved that after the first shot was fired the deceased advanced upon his assailant and reached him. The prisoner only fired one shot, and therefore upon this would largely turn the decision whether he had really produced the fatal wound. Now, in viewing this branch of the subject we must carefully consider what are the functions of the cerebellum. We know that this question forms a very debatable one in physiology. There are, however, certain ascertained facts which will help us to a decision. There is no doubt that some lesions of the cerebellum are attended by loss of coördinate movement. Flourens says: "I removed the cerebellum of a pigeon in successive slices. During the removal of the first layers there appeared only a weakness and want of harmony in its movements. On removal of the middle layers the animal exhibited a general agitation, without true convulsions. It made brusque and irregular movements, and continued both to see and to hear. On removal of the last layers the animal entirely lost the power of standing, flying, leaping, or walking, which had been gradually affected by the preceding mutilation. Placed on its back it was unable to rise. Instead of remaining quiet and immovable, like pigeons deprived of their hemispheres, it was in a continual state of restlessness and agitation, but could never make any determinate movements. ..... Sensation, volition, and intelligence remained."[3] We know, on the other hand, that in some cases of diseases of the cerebellum the patient does not exhibit any marked want of power of coördination. Andral has noted ninety-three cases of disease of the cerebellum, and on analysis comes to the conclusion that only one of them quite supports Flourens' theory that the cerebellum is the organ of coördination of movements.[4] Combette[5] gives the particulars of the symptoms observed in a young girl in whom there was complete absence of the cerebellum. This patient could stand and walk up to a short period before her death, and the only characteristic symptom noted was that *se laissait souvent tomber*. Another case reported by Bouillaud, and referred to by Longet and Vulpian, is that of Guérin, whose cerebellum was found after death to be almost completely destroyed by disease. This patient still retained the

[2] Cooper's Surgical Dictionary, vol. i., p. 900.

[3] Ferrier: Functions of the Brain, p. 87.
[4] Op. cit., p. 89. [5] Revue Médicale, 1831.

power of coördination of movements, and could walk, only he was observed to reel and totter when he walked. In reference to this case Vulpian remarks: "Here we have a case in which the cerebellum was destroyed, and yet the patient could walk, though in an unsteady manner. But if this (Flourens') hypothesis were well founded, he ought not to have been able to stand or walk a step, for the combination of muscular contractions necessary for locomotion or maintaining the erect attitude ought to have been altogether impossible."[6] Ferrier, while admitting that lesions of the cerebellum cause disturbances of stability and locomotion, believes that the evidence from all sources tends "to show that the cerebellum is not specially concerned in the coördination of locomotion—a function which we have seen reason to localise in the optic lobes." It is necessary, however, that we should observe a distinction between injuries suddenly inflicted and diseases slowly progressing, for in the former case we have in addition the element of shock in operation. But it will be observed also that even allowing for this, Flourens' incisions, while they were confined to the outer parts, caused very slight disturbance, and that it was only when the deeper parts were reached that the symptoms of want of coördination were well established. Consciousness was never lost during the operation, and intelligence remained unimpaired. It may be stated then—and this will be further illustrated in the consideration of the next question—that in a wound of the cerebellum the person injured need not necessarily fall, and that it would be possible for him to make forward movements for some distance, irregular it may be, but so long as the cerebral functions were not interfered with, with absolute consciousness and intelligence.

3. Is a wound of the cerebellum a necessarily fatal injury, immediate or remote? Any lesion of the brain substance is always dangerous, and may be attended with immediately fatal consequences. But, on the other hand, there are numerous instances on record in which the most severe injuries have been unattended with any symptoms. Professor Bigelow vouches for a case in which an iron bar, weighing 13½ lb., 3 ft. 7 in. long, and 1¼ in. in diameter, was driven through a man's skull by a blasting charge. It entered the cranium opposite the left angle of the lower jaw, behind the zygoma, and emerged on the left side of the centre of the frontal bone, near the saggital suture. The man was conveyed home in a cart, in which he sat upright, descended of his own accord, and then with but little help mounted a long flight of stairs leading to a piazza, where he sat down, perfectly conscious, until aid could be procured. He recovered.[7] A case more in point is that recorded by Brown-Séquard,[8] which is from notes supplied by Mr. Brownfield, house-surgeon to the Poplar Hospital. A man fell into the hold of a ship a distance of sixteen feet. He fell so that the back of his head struck against a railway bar. The immediate effect was a slight stunning, but so slight that he was able to walk out of the ship's hold on to the deck. The surgeon who saw him found no symptoms, and told him to go home and rest. He walked one-third of a mile to the hospital, and on admission walked upstairs to bed. He, however, died the same night. On post-mortem examination there was a blood effusion under the dura mater on the surface of the left hemisphere. It was traced forwards and downwards around the anterior lobe, and then backwards along the base of the skull to a laceration of the cerebellum. This laceration was of the left lobe, on the inferior and posterior surface. It was vertical, an inch and a half in length, and half an inch deep. It was situated in the lobe quite away from the pons or crus cerebelli. Other cases from the history of the American war show certainly that injury is not immediately fatal, and the case I have just cited proves that a very extensive lesion of the cerebellum may be present without giving any symptoms whatever of want of power of coördination.

[6] Op. cit., p. 89.
[7] Medical and Chirurgical Review, 1850, vol. vi., p. 544.
[8] THE LANCET, Nov. 30th, 1861.

HOSPITAL DEMONSTRATION AT HAMPSTEAD.—A Friendly Societies' demonstration and church parade was held at Hampstead on the 24th inst. on behalf of the North London Hospital for Consumption. On the route of march to the parish church, where a specially arranged service was held, tables and collecting boxes were placed at convenient points, and a liberal collection was made at the church.

CYSTINE IN THE URINE SUCCESSFULLY TREATED BY LARGE DOSES OF CARBONATE OF AMMONIA.

BY LIONEL S. BEALE, M.B., F.R.S.,
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CYSTINE is one of the most persistent of urinary deposits. After it has once appeared it may be produced, and in considerable quantity, over a period of twenty years or more, or its production may only cease with life. It is among the least common of urinary deposits, and usually its presence is not associated with any symptoms more serious or definite than malaise, a feeling of weakness, fatigue, or exhaustion, with depressed or very low spirits. One of the most remarkable cases of cystine deposit which I ever saw came under my notice many years ago, and has been under observation for fifteen years or more. During part of this time I saw the patient very frequently, and made many examinations of the urine, of the deposit, and of the calculi, which he passed in considerable numbers.

The patient (E. H. O——) was a fairly healthy-looking man, of thirty, 5 ft. 5½ in. in height, weighing 9 st. 6 lb., who was by trade a packer, an occupation involving pretty hard work and long hours. For four years before he came to me he had suffered more or less from lumbar pain and discomfort about the thighs, especially on exertion, and he often felt weak and low. He sometimes had to walk with a stick and had had to give up work now and then for a week or two at a time. About two years after the first commencement of the symptoms he suffered from a fixed pain in the left groin, and soon afterwards several stones were passed, sometimes to the number of twelve or more at once. One of the calculi, however, was so large that it remained in the bladder, and Mr. Coulson had to crush it.

I put the patient on carbonate of ammonia and told him to increase the dose gradually until it amounted to about fifty grains a day. He found the remedy agree with him so well that he soon exceeded this quantity, and for twelve months he took as much as fifty-five grains daily on the average, on some days consuming much more, on others considerably less, than this amount. In this time he did not pass as many calculi as before he had passed in a single month, and his weight increased to 9 st. 11 lb. In the next year he took about thirty-five grains of carbonate of ammonia per diem, and in the following only an average of about twenty grains a day. This patient's family history was not very satisfactory. His mother died at the age of fifty-two of phthisis, and two sisters died under the age of twenty-five of the same disease. He did not look a strong man, and the muscles of his arms and legs were below the average size and prominence. When a young man he used to take violent exercise and rowed in races. The quantity of urine passed was generally about the average, and never exceeded three pints. Every specimen that passed during a period extending over at least five years, he feels sure contained cystine. Afterwards the cystine was very frequently detected in considerable quantity. The crystals could be seen in the urine immediately after it was passed as small sparkling grains. The ammonia not only diminished the formation of the cystine, but the patient found that while he was taking it his bowels acted freely and he never required an aperient, although previously he had been much troubled by obstinate constipation. When the ammonia was not taken he says he did not feel as well as when he was taking it. He found no inconvenience from taking these large doses of carbonate of ammonia, and soon became so accustomed to the taste that he did not object to it in the least. I have seen this patient at intervals during the last few years, and although cystine in small quantities was generally present in the urine, it gave him no inconvenience, and no calculi seem to have been formed for the last three or four years. In this case, then, cystine has been found in large or small quantity during a period of at least eighteen years, and for the first five or six years of this time hundreds of cystine calculi were passed, the largest being about three-eighths of an inch in diameter, the smallest not larger than the head of a very small pin. The cystine crystals formed a visible whitish deposit, which varied much in quantity, even from day to day, but sometimes formed a sediment.

Another case was that of a gentleman about fifty, who had suffered from abundant cystine deposit for two years before I saw him, and had passed seven or eight renal calculi, some of them beautifully crystalline, and entirely composed of cystine. This patient took fifty grains of carbonate of ammonia dissolved in two ounces of distilled water three times a day after a meal for upwards of two years without any inconvenience, and during this time he had not even once required an aperient. If he gave up the ammonia he did not feel "up to the mark." As the amount of ammonia seemed very large in proportion to the water in which it was dissolved, I had twenty-five grains of Howard's volcanic carbonate of ammonia dissolved in an ounce of distilled water, and found that, although it tasted very strongly, it was not caustic. On inquiry, Mr. D—— informed me it was only gradually that he reached this degree of concentration, but that he experienced no difficulty in taking it. He took it immediately after a meal—"on an empty stomach it produced nausea." For three years, with scarcely an intermission, 1050 grains of carbonate of ammonia were taken per week. The cystine deposit ceased during the last year of taking the medicine, and three years have now passed without its recurrence. I think, therefore, we may regard this case as really "cured" by the large doses of carbonate of ammonia.

It is to be feared that the tendency in the present day is rather to prescribe new remedies which are being continually introduced than to select from old ones such as are known to have valuable properties, and which have been proved by long experience to be really beneficial in certain pathological conditions. Far from condemning the new because they are new, like all who know the extreme value of such things as salicylate of soda and bromide of potassium I am most anxious to acknowledge my gratitude to those who devote themselves to the study and the discovery of the healing properties of every substance that can possibly be of use in treatment. But, while I am desirous not to say anything that could suggest to the reader that I am condemning the new things, I would impress upon the rising generation of practitioners the importance of being careful not to neglect the old. One cannot but desire that a drug like ammonia, so valuable in many forms of disease and departures from the healthy state, should not be forgotten or laid aside. The cases of cystine deposit to which I have drawn attention prove not only that large quantities may be taken without detriment or inconvenience, but that the use of the drug may be continued for a considerable period of time with advantage, and without the slightest derangement of any of the physiological processes being occasioned.

In our endeavours to help those who have acquired the vicious habit of consuming too much alcohol, ammonia is of great use, but it ought to be given in doses far larger than those in which it is usually prescribed. One of my patients assured me that he found ammonia very beneficial, that it relieved him of the feeling of tiredness from which he frequently suffered, and enabled him to perform hard work without getting exhausted. Not only have I found great benefit result from giving ammonia in considerable doses in many low forms of illness, but I have experienced its good effects by taking it myself. It acts very differently from any form of alcohol, although its effect upon the patient as judged from his own sensations appears to be somewhat similar. Though no feeling of hilarity seems to be induced by it, the lowness and depression of spirits and the tired feeling affecting the muscles, or rather the nerves and nerve centres by which they are supplied, are often removed in the course of half an hour or less by a dose of ammonia.

The cases I have adduced are sufficient to show that ammonia may be given in much larger doses than are generally prescribed, and that it need not be diluted to the degree generally supposed to be necessary. We used to be taught that five grains of carbonate of ammonia should be dissolved in at least an ounce of water, but as one of my patients took as much as twenty-five grains per ounce, and continued this three times a day for three years, we may feel satisfied that a solution of from ten to fifteen grains per ounce may be taken without difficulty, and I have prescribed this as often as once an hour in cases where the heart's action was very feeble and a decided stimulant was evidently necessary.

The public have discovered the value of sal volatile in cases of cold-catching and many minor ailments, but ammonia, like many other substances of real value in the treatment of many departures from the healthy state, has lately been somewhat neglected, and is, like some other valuable remedies, in danger of being forgotten amid the multitude of new preparations which thrust themselves upon our notice; and it is therefore desirable that attention should be directed to its usefulness, as well as to the value of many other drugs which have been of real service to past generations of patients.

Grosvenor-street, W.

ON FIVE CASES OF

SPORADIC CRETINISM IN SCOTLAND.

BY ROBERT KIRK, M.D., F.F.P.S. GLASG.,
OUT-DOOR PHYSICIAN-ACCOUCHEUR TO THE GLASGOW WESTERN INFIRMARY.

(*Concluded from page 316.*)

CASE 4.—J. R——, male, aged thirty years, born at Falkirk, where he still lives. His parents are both in good health, free from goitre, and state that they knew nothing of the malady until it appeared in three of their children; to be noticed presently. The history is in other respects like that of the others, except that the father has occasionally indulged in drink. The patient is the third of eleven children, eight of whom are quite healthy; his eldest sister, who died lately, was affected like himself; his youngest sister is the subject of Case 5. Nothing was thought to be wrong with any of these three at their birth: they were like other children. It would seem, however, that there were certain indications of the malady, although of a very different kind from those existing in the former cases; for the mother stated that J. R—— was an extremely beautiful infant, having a fine pink flush on his cheeks and ears like wax. After some time, although it was impossible to find out exactly when, he gradually changed; his complexion became dull and sallow; he grew slowly, and had a small appetite; years elapsed before he cut his first teeth; at seven he began to walk with a feeble and tottering step, and he was ten before he made the first feeble efforts to articulate. The neck is the only part of the body that has ever been swollen, where there is a bronchocele of considerable size. His height is 4 ft. 6 in.; circumference of the head 21½ in; there is a considerable posterior curvature of the spine in the cervical region; the head, trunk, and limbs are fairly proportioned; except a slight doughiness of the ears, there is no sign of myxœdema about the skin; no swelling anywhere. On the contrary, he is emaciated, and the skin is soft and free from desquamation. He has a double goitre, the swelling being as large as the fist on the left side, and somewhat less on the right; there is no trace of supraclavicular swellings on either side of the neck. He has the following features of the cretinous type of conformation:—Wide interval between the eyes; root of the nose much depressed; alæ nasi very wide, and the point of the nose elevated; arch of the palate narrow and high; lower lip depending, markedly thick in comparison with the upper, which is thin; tongue thick but moist; tendency to salivation. He is beardless but the hair of the scalp is abundant; abdomen slightly tumid; genitals not examined, but I had the opportunity of observing that there was a fair amount of pubic hair. The skin is generally dry; there are numerous pink spots over it, somewhat like faint petechiæ, some of these being apparently older and fainter than the others; veins are everywhere noticeable over the surface. He has his permanent teeth, and the lower incisors are notched as in Case 3; the upper are much worn. He is extremely slow in all his movements and cannot be hurried; he breathes heavily on the least exertion, from evident compression of the trachea; pulse and cardiac sounds weak; temperature in the axilla 97·8°; his skin always feels cold and he often becomes blue; he is extremely sensitive to cold, and last winter his mother says he was on one occasion nearly frozen to death. His articulation is hurried and indistinct, and seems almost painful to him; it is perhaps not so nasal as in other cases, but I heard only a few words, thrown out with a jerky effort. He could never be taught to read, write, or do any sort of work. All his senses are good, and he has no perverted idiotic propensities. His mother says the goitre is growing faster of late, and he is getting gradually weaker. The eldest sister of this patient was in a rather worse condition than himself, and was at

one time, apparently, swollen; she had a bronchocele on the right side as large as a two-pint pitcher. She died at the age of thirty-two of dyspnœa with gradually increasing emaciation, stiffness, and feebleness. She was about the size of a girl of twelve years.

CASE 5.—A. R——, aged fourteen, sister of the foregoing, and youngest of the family, is 4 ft. in height. She does not present so bad a case; the limbs are fairly proportioned, but the hands and wrists are thick; the fingers are tolerably long; the abdomen is slightly tumid. She can walk well; though weak on her legs and not so forward as girls of her age, she has made some progress with her education. Nevertheless, she is a decided cretin. There is marked flattening of the nose, with elevation of the point, and very wide alæ nasi; wide interval between the eyes; both lips thick, especially the lower, the face having a prognathous appearance; tongue moist but thick, and too large for the mouth, while its movements are precisely the same as those seen in adult myxœdema; palate vaulted; intensely nasal intonation. The neck is remarkably broad at the base, although not in the least myxœdematous; there is a goitre on the right side, about the size of an egg; no trace of swellings above the clavicles. Skin generally dry and cool, and nowhere rough; no desquamation; upper eyelids slightly tumid, forming slight folds, which rest nearly on the eyelashes; ears a delicate pink, showing fine veins behind. Permanent teeth developed, and the lower incisors are notched, as in Cases 3 and 4. The upper incisors require special notice. These are quite normal in front, but the posterior surface is excavated into a hollow having two sides, united at nearly a right angle. One of these sides is horizontal, and nearly on a level with the gum; the other forms the posterior surface of the tooth. This latter side is marked by three distinct black lines, radiating from the bottom of the cavity. These features are most pronounced in the central pair, the lower half of which is thus very thin. They have none of the marks of syphilitic teeth. I examined the teeth of both parents, and of their eldest son and two daughters, and found them excellent; none of them being syphilitic, nor having any of the characters above described. The patient is always cold, and fond of sitting by the fire; temperature 98°; she sometimes sweats a little. Her heart and pulse are tolerably strong, but her mother thinks she is becoming weaker of late, especially in walking. These three members of the family have never had scarlatina, measles, or whooping-cough.

Remarks.—I do not find in the latest French treatises on cretinism — as for instance, Baillarger's "Enquête sur le Goitre et le Crétinisme" (1873), or the article in the "Dictionnaire des Sciences Médicales" (1879)—any reference to the characters of the upper incisors I have just mentioned. I would draw special attention to them; they are very distinctive, and should they be found constant might be of some diagnostic value. It is true there are numerous cases where this will not be available, for many cretins never get the second teeth, and when these do appear they are very carious and are soon lost. But where they exist this point should be attended to, and might be found of service in thoses cases, of which a few have been recorded, where myxœdematous symptoms supervene in childhood after the second dentition, and in which it is difficult to determine between myxœdema and congenital cretinism.

It cannot be doubted that the above cases are all examples of cretinism. Cases 3 and 5, which present the malady in its slighter forms, have a considerable number of marks which belong only to this disease, and which certainly differentiate them from the subjects of any other cachexia. This being granted, there is one point which appears very striking. While all have something in common there is a wide divergence between them in many respects. The same seems to be the case, too, with endemic cretinism, for we meet with descriptions of cases which are evidently the exact counterparts of the above, and even others besides. Yet we scarcely find any attempt made at classification, except with reference to the different degrees of severity of the symptoms. One might suppose that cretins ought to be divided into classes founded on well-defined differences of morphological type, with divergence in symptoms, history, and other particulars. Amongst many other features which seem to characterise one class more than another, we find, for instance, a remarkable difference with respect to myxœdema, some being even thin, while others are much swollen. In the light of recent researches can we doubt that this alone is an important distinction, probably having reference to various conditions of the thyroid, and that these two classes of cases will show characteristic discrepancies in a variety of other points, as in the cases above detailed?

These cases, further, have an important bearing on certain views which have been lately entertained as to the supposed difference between endemic and sporadic cretinism. Mr. Curling, as is well-known, in a post-mortem examination of two cases of the latter found that the thyroid was absent and that the supra-clavicular swellings were composed of fat, and the late Dr. Fagge formed the opinion that these two features constituted an anatomical distinction between this affection and endemic cretinism, and he published four additional cases in which during life the thyroid seemed also to be absent. Subsequently, however, he had the opportunity of making an autopsy of one of his own cases, and he found that the thyroid was not only present, but was goitrous in its right lobe. He duly emphasised this fact, but still believed that the fatty tumours remained as a constant distinction between the two diseases, having been found in all cases of sporadic cretinism, even in those accompanied with goitre, of which two had been reported at that date—namely, Dr. Fagge's own case just mentioned, and one reported in the *Medical Times and Gazette* for 1855 (vol. ii. p. 266). But the present series of cases clearly shows that this distinction was not founded on a sufficient basis of fact. Besides, are we sure that the thyroid is never absent, and the tumours in question never to be found, in endemic cretinism? After a careful search I have found no positive statements with regard to the thyroid in French authors, except as to the presence or absence of bronchocele; indeed, this was all that was proposed to be kept in view when the French Commission, of which Baillarger gives the report, was instituted. Again, in the article on Cretinism in the "Dictionnaire des Sciences Médicales" (1879), it is stated that the greater number of autopsies which have been made of cretins are untrustworthy, and we find no reference made to the neck except when goitre existed. We may suppose it possible that the point has been wholly overlooked. It would appear very probable that in some of the non-goitrous cretins, who are generally of the lowest type and correspond closely to the majority of cases of sporadic cretinism reported in this country, the thyroid will sometimes be absent. With regard to the fatty tumours, we have positive evidence that they were noticed by some observers. Thus M'Lelland, in his "Medical Topography of Bengal," states that the swelling in the necks of cretins does not always begin in the thyroid gland, but may commence with "a fulness of the base of the neck on one or both sides above the clavicles." If we do not find these mentioned in descriptions of endemic cretinism in France, neither do we find them referred to in cases of the sporadic affection in the same country until quite recently. In a case of sporadic myxœdematous cretinism in *Le Progrès Médical* for 1880, p. 709, by Bourneville, they are expressly mentioned, but in otherwise precisely similar cases reported in France ten years ago we find no reference to them. It is probable that they are in proportion to the myxœdematous condition generally, and are to be found in many cases of endemic as of sporadic cretinism.

But probably the chief interest of the preceding cases will be found to lie in the light they may shed on the question of the relationship of cretinism to the cretinoid affection or myxœdema of adults. The subject can only be glanced at within the limits of this article. How far are these two conditions related to each other? If we confine our attention to the first two cases, it would appear that we might fairly designate them as examples of congenital myxœdema. They closely resemble the adult affection in all essential points, with only such modifications in Case 1 as might plausibly be accounted for by the period of life at which the disease existed; although it is certainly curious that Case 2 should rather correspond to myxœdema at a very advanced age. But if affinity in essential features be granted, the question arises, Is myxœdema the principal factor in producing the various symptoms of cretinism, as has been suggested, and as it has been held to do in the adult affection also? The answer would seem to be in the negative. Case 2 belongs to a rather lower type than Case 1; the mental and muscular powers are weaker, while the deposition of mucin in the tissues, if such there be in this case, must be very much less. It might be compared, perhaps, to Dr. Goodhart's case of myxœdema, in which little mucin was found in the tissues after death, and appears to teach the same lesson. If we go a step further, and admit that the remain-

ing three cases have anything in common with myxœdema, we must widen our range of view still more; and there would appear to be an intimate bond of connexion between the two. In Case 3 the ears, the cheeks, the thick lips (which, in framing themselves, to speak more especially, at once reminded one of myxœdema), and the furfuraceous desquamation, were all distinctive. In Case 5 the size and movements of the tongue and many other features could not be referred to any other cachexia. It is probable, too, that Case 4 was at one time more swollen than he is now, though in many points he still resembles a case of myxœdema; while in all there were marked nasal intonation, slow movement, defective mental capacity, susceptibility to cold, and other symptoms. It is evident that these symptoms were far from being in proportion to the apparent degree of myxœdema, neither did they correspond in gravity to the lowness of the bodily type of conformation as much as might have been expected. It is certainly curious, too, that the various features of myxœdema should crop up in such a variety of modified forms in these several cases, and that such characteristic phenomena as the furfuraceous desquamation should be present in one case and absent in others. The nasal intonation and the peculiarities of nasal conformation were more nearly alike in all than any other features. It might almost be said that the myxœdema of adults is but a single and stereotyped form of a disease which admits of numerous modifications, only to be found and studied in cretinism. The entire subject abounds in paradoxes. The apparent connexion of cretinism with goitre, on the one hand, and yet the existence of facts which have suggested an antagonism between the two on the other; the greater liability of females to the former and of males to the latter disease; the special susceptibility of women to goitre at the climacteric period of life and after confinement,[1] and to atrophy of the thyroid and myxœdema in the same circumstances—these are all facts probably connected by some yet hidden and secret links.

Partick, Glasgow.

ACUTE INTUSSUSCEPTION IN AN INFANT EIGHTEEN WEEKS OLD.

STERCORACEOUS VOMITING; INFLATION BY WATER PER ANUM; RAPID SUBSIDENCE OF SERIOUS SYMPTOMS; RECOVERY.

BY HERBERT COLLIER, M.D. BRUX., &c.

WILLIAM B——, aged eighteen weeks, was brought under my notice on Feb. 16th last, suffering from great collapse, and with marked signs of acute obstruction of the bowels. The mother stated that she suckled the child from birth, but as she did not have sufficient milk she supplemented this diet with small quantities of bread soaked in water and sweetened with sugar. The infant had never rejected his food till about a week previous to my seeing him, when he commenced to return a small portion of the milk after each meal; the bowels also became costive, and the evacuations slimy and highly offensive. The child, however, "appeared quite well, and seemed more hungry every day." At the age of ten weeks he had a slight attack of bronchitis, which, under medical treatment, passed off in a few days. Since his recovery no medicines of any kind had been given. On Feb. 15th, whilst lying asleep in his mother's arms, he suddenly became convulsed and appeared in great pain, screaming loudly and struggling, so that it was with difficulty that he could be held. After the fit had lasted a few minutes the struggling gave place to violent straining, "as if he was trying to relieve himself," and during these efforts a large quantity of gas was discharged per anum. On the diaper being inspected, it was found to be soaked with bright blood and slime, but did not contain any fæcal matter. He now appeared more calm, and after a short time took the breast, but almost immediately afterwards became very sick, bringing up a large quantity of milky fluid. Since then he had mostly been quiet, crying and straining only by "fits and starts." He had taken small quantities of milk-and-water from a teaspoon, but nearly always returned them immediately. No natural action of the bowels had occurred since an hour before the onset of the attack, although the diapers were several times found stained with "bright watery blood." Urine was passed more frequently, but in smaller quantities than usual.

When seen by me on Feb. 16th, at 4 P.M., I found the condition of the child to be as follows. He was well nourished, but much collapsed, with pale face and pinched, drawn features; pulse 100, feeble and irregular; respiration 30, shallow; skin cold and perspiring; temperature 100·5°, taken in the rectum. There was much distension of the abdomen, and percussion yielded a tympanitic note, except where the right inguinal and hypogastric regions were occupied by an elongated swelling, which ran in a direction upwards and inwards, and could plainly be seen and felt. Pressure over this tumour gave rise to crying and struggling on the part of the infant. On account of his tender age it was not considered advisable to extend the examination to an exploration of the rectum. Three blood-soiled diapers were shown by the mother, and one of them, said to be in use at the onset of the attack, contained about two ounces of blood and mucus. Having diagnosed acute intussusception, it was thought best to resort to inflation of the bowels as soon as possible, but as an anæsthetic was necessary for the more perfect execution of this operation, some valuable time was lost in procuring the requisite assistance. In the meanwhile hot fomentations were applied to the abdomen, and a mixture containing tincture of belladonna, chloric ether, and sal volatile, in appropriate doses, was prescribed every two hours. At 6 P.M. the child was in much the same condition. The pulse was slightly stronger, and he had not vomited since my last visit. He had refused the breast, but had taken and retained two doses of the medicine. The same treatment was continued, in addition to which ten drops of brandy in a teaspoonful of ice-water were given every half hour. At 8 P.M. the pulse was still more improved, although vomiting had occurred twice since I last saw him. About an ounce of blood-stained mucus was passed per anum during this visit. The treatment was continued. At 9 P.M., after a consultation with my friend Mr. Blake of Great Yarmouth (to whom I am indebted for kind assistance during the subsequent inflation of the bowels as well as for giving chloroform), it was decided to anæsthetise and attempt to dislodge the prolapsed portion of bowel by injecting water. After chloroform had been inhaled some few seconds, and before insensibility was produced, the patient became violently sick, ejecting about half a pint of pale-yellow fluid, having a strong fæcal odour. The pulse at this moment became scarcely perceptible, and the child appeared in the gravest danger; but on chloroform being suspended and ammonia applied to the nostrils, the pulse returned, and remained fairly strong throughout the remaining stages of anæsthesia. The fingers of one hand being kept in contact with the sausage-shaped tumour described above, warm water was slowly injected into the rectum by means of a Higginson's enema syringe, care being taken to prevent its return by the side of the nozzle. When about twenty ounces had been injected, a sense of the tumour slipping away was plainly perceptible to the fingers in contact with the abdomen. By the time some thirty-five to forty ounces had been injected the tumour had entirely disappeared, and the most careful examination failed to detect it. The patient was now wrapped in warm blankets, and the injected fluid allowed to drain off. During returning consciousness the child once more vomited freely, bringing up fluid of the same colour, and possessing the same strong fæcal odour, as before. Ten drops of brandy in a teaspoonful of ice-cold water were subsequently administered and retained, and the child afterwards manifested an inclination to sleep. The hot fomentations were again ordered to be applied to the abdomen, and the belladonna mixture to be given every two hours. At 12 P.M. a large quantity of water was found to have been passed per anum. The child appeared more comfortable, and was sleeping calmly. He had not evinced a desire for milk when placed to the breast. On the diapers being changed in my presence, about two tablespoonfuls of dark-yellow fæcal matter were found to have been passed. The fomentations were ordered to be continued to the abdomen, and the mixture given every four hours.

Feb. 17th.—9 A.M.: The child had taken the breast twice during the night, and had another natural action of the bowels at six o'clock this morning. From this time the patient made an uninterrupted recovery.

The features of interest in this case are so obvious that it

[1] Baillarger, p. 18.

is unnecessary to particularise them. I may, however, be permitted to state that, so far as I am able to ascertain by reference to several authors upon the subject, it affords the earliest example of recovery in so young a victim to this disease.

Gorleston, Suffolk.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullaantem cetalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF DISEASE OF THE THYROID GLAND; REMOVAL OF ISTHMUS AND PART OF LATERAL LOBES; CURE; REMARKS.

[(Under the care of Mr. SYDNEY JONES.)

FOR the following notes we are indebted to Mr. W. H. Battle, surgical registrar.

CASE 1.—E. H——, aged twenty-four, married, and having one child, was admitted on Jan. 23rd last. The patient had not suffered from any previous illness, excepting periodical severe frontal headache, accompanied by nausea. When she was eight years old a swelling was first noticed in the neck, and thenceforward it steadily increased in size. For the last ten years it had at times caused difficulty in breathing. During the attacks of dyspnœa the respiration was noisy but there was not any lividity of the face or lips. Each attack generally lasted a few hours, but once it continued for three days. During the last two years there had occasionally been difficulty in swallowing, and for about the same period of time there had been palpitation of the heart, and "faint sickness" at the catamenial periods. For the last six months the difficulty in swallowing had been more frequent, and she stated that she had been getting paler.

On admission, she was a pale but well-nourished woman, of rather dark complexion, holding her head down a little on the right side. She complained of a throbbing swelling in front of the neck, and attacks of difficult breathing, coming on once or twice a week. There was a tumour in the position of the thyroid gland, moving upwards when the patient swallowed. Examination showed it to consist of two divisions, somewhat egg-shaped, the larger being situated under the right sterno-mastoid, and the smaller in the middle line of the neck, and connected with the larger by means of a broad isthmus. In the middle line the tumour extended from the cricoid cartilage to the sternal notch, its vertical measurement being 2½ in. On the right side the tumour passed under the sterno-mastoid, which it pushed forwards, and reached from the point where the external jugular vein crosses the posterior border of the muscle to the clavicle. This lateral portion of the tumour was softened, and there was more pulsation visible over it than over the median line (communicated by the carotid). There was no fluctuation anywhere. The vertical measurement of the right lobe was 3½ in., widest transverse measurement 5½ in. The enlargement of the left lobe was comparatively slight, excepting near the isthmus; it, however, extended from the right of the middle line to underneath the anterior margin of the sterno-mastoid. The superficial veins were not enlarged, and there was no exophthalmos. Temperature normal. Further examinations made during the time intervening between her admission and the operation (fifteen days) proved absence of cardiac and renal disease. There was no venous murmur in the neck, the breathing became easier, and she had no attack of dyspnœa, but complained of occasional difficulty in swallowing and of palpitation. The catamenia were regular, and there was no increased difficulty in respiration at the period. A tender spot was found on the left side of the tumour under the sterno-mastoid, over a part which felt firmer than the surrounding substance.

On February 6th, the patient having been placed under the influence of chloroform, Mr. Sydney Jones made an incision in the middle line from the upper border of the tumour downwards to the episternal notch. When the deep fascia was divided, the tumour, covered with its capsule, bulged forwards through the incision; the isthmus was at once seen to the right of the middle line, and it became more evident that the bulging in the middle line was due to a displacement of the left lobe of the gland. There were only two or three vessels of any size which required to be ligatured. The finger was passed behind the isthmus from below; and, with this as a guide, an aneurysm needle, carrying a double ligature of strong silk, was passed through the middle of the left side of the isthmus, the ligatures being locked and tied above and below. A similar double ligature was passed on the right side and tied; the isthmus was then divided with the scalpel. A double ligature was then passed through part of the left lobe so as to include about the mesial third, and the portion internal to the ligatures was cut off. The section exposed semi-translucent whitish matter scattered thickly through the substance of the gland. A few small vessels required to be ligatured in the wound, but there was no hæmorrhage from the cut surface of the gland.

An examination of the trachea proved it to be keel-shaped and compressed laterally, the sharp edge pointing forwards; it was also displaced to the right. The ends of the strong silk ligatures were left long and tied in a knot outside the lower angle of the wound, from which a drainage-tube passed the whole length along the floor to the upper margin. Alternate silk and catgut sutures were used to close the wound. Carbolised oil, iodoform wool and salicylate wool, secured by means of antiseptic gauze bandages, were applied as dressing, and the patient placed in bed, sand-bags being used to keep the head steady. In the evening the wound was redressed; there was slight venous oozing and the temperature was 97·4°. On the 7th the wound was again dressed; the discharge was blood-stained; there was also a quantity of clear unstained serous-looking fluid. The head and shoulders of the patient were raised, to permit of free discharge. Temperature, morning, 102°; evening, 102·8°. On the 8th the pulse was 92; respiration 24; temperature, morning, 101·2°; evening, 100·8°. On the 11th the remaining sutures were removed, the wound having quite united. On the 16th a lotion of chlorinated soda was applied and strapping was placed across the wound. On the 29th a lotion of sulphate of copper (two grains to the ounce) was applied, and on March 4th the patient was allowed to get up, but it was not until nine days later (thirty-fifth after the operation) that the last ligature came away, after which the wound soon closed. She left the hospital on March 16th.

After February 17th the temperature did not reach 99·6°; between the 8th and the 17th the morning temperature varied from 99·2° on the 15th to 101·4° on the 12th, and that of the evening from 100° on the 10th to 102·4° on the 13th, there being an average difference of one degree between them during that period.

CASE 2.—H. K——, aged seventeen, a fitter, was admitted on March 24th. The mother of the patient had, it was said, a swelling in the neck similar to the patient's, but nothing definite could be discovered about it. In the present case the enlargement was first noticed in the lower part of the neck six months before admission. It slowly increased, but for three weeks had grown more rapidly, especially on the left side. Some alteration in the voice had been noticed for about four months; there had also been slight difficulty in swallowing. During the whole time since the commencement of the enlargement he had had aching pains in the eyes, and he has also had slight palpitation on unusual exertion.

On admission, there was considerable enlargement of the thyroid gland, extending from the level of the hyoid bone to the root of the neck, the greatest prominence being at the level of the isthmus, which, however, did not appear to be affected. The swelling was limited to the lateral lobes; it was soft but without fluctuation; there was slight pulsation to be felt. There was no fulness of the superficial veins. There was some cardiac hypertrophy, and a lengthening of the first sound at the base. No exophthalmos; no evidence of visceral disease. The circumference of the neck on a level with the seventh cervical vertebra was fifteen inches, round the root of the neck fifteen inches and a half, being a quarter of an inch more on the left than on the right side.

On April 2nd, Mr. Sydney Jones operated, making an incision in the mid-line of the neck, about four and a half inches in length, down to the capsule of the thyroid isthmus, which was exposed. Some veins required ligature, and after they had been secured, the isthmus was isolated by means of the director; the isthmus, which was very friable, gave way

when it was being separated from the front of the trachea; a double silk ligature was then passed through the anterior part of the lateral lobes and tied in each case above and below, a considerable portion being thus removed. The substance of the gland was granular and easily broken down. The trachea had been slightly compressed laterally by the growth; its anterior surface was quite cleared by the operation. A drainage-tube was placed along the wound, the edges of which were brought together by means of silk sutures, the long ligatures of thick silk which were attached to the thyroid being brought out at the lower angle. The wound was dressed under the carbolic spray in the usual manner.

For some hours after the operation the patient had a headache, but otherwise felt quite well. The day after the operation the wound was redressed; six days later the sutures were removed, plaster being placed across the wound to keep the edges well apposed. Two days later chlorinated soda lotion was substituted for the antiseptic dressing and the drainage-tube removed, and twelve days after the operation the last ligatures came away. He got up on the sixteenth day, and twenty days after the operation the neck measured fourteen inches. When seen after he had left the hospital there had been further diminution in the size of the neck.

On the evening of the day of operation the temperature was 98·8°, rising next morning to 103·2°, falling during the day to 99°, and rising later to 101·8°. There was then a gradual fall (excepting on the 6th, when it rose to 102·2°) to 96·8° on the 9th; from that date until the morning of the 12th there was a gradual rise, reaching 103°, and falling next day to 96·4, after which it rose to normal, and continued so.

Remarks.—In the cases which have been operated on in the median line by Mr. Sydney Jones, in some a well-marked isthmus, drawing tightly together the lateral lobes, has been observed; in others the isthmus has not been so well marked. In all cases the object aimed at has been to form a deep sulcus in front of the trachea so as to make a wide separation between the lateral lobes, and to effect this wide separation when the isthmus has not been well marked, and when the lateral lobes have been approximated part of each lateral lobe has been removed after transfixion with a double ligature. In all cases shrinking of the lateral lobes has occurred, in addition to the relief to the difficulty of breathing and deglutition. Free drainage has been secured in the middle line by a drainage-tube in front of the trachea, and no symptoms causing any anxiety have occurred.

LIVERPOOL NORTHERN HOSPITAL.

ANEURYSM OF ARCH OF AORTA; EMBOLISM OF ABDOMINAL AORTA; NECROPSY; REMARKS.

(Under the care of Dr. DICKINSON.)

FOR the following notes we are indebted to Mr. S. W. Roughton, M.B.Lond., house physician:—

A. H——, a sailor, aged twenty-eight, was admitted into the hospital on March 29th of the present year. He stated that for four weeks he had suffered from pains in his joints and across the front of his chest. On examination, no physical sign of disease was discovered. The urine was natural. He denied ever having had any venereal disease, and said that he had always been temperate. The pains in the joints subsided in a few days, but the pain in the chest persisted and became worse. On April 12th he first complained of slight cough, and on April 16th an area of dulness over the upper part of the sternum, continuous with the cardiac dulness, was first noticed. Over this dull area the heart sounds were very loud, but no bruit was audible; the right radial pulse was also noticed to be a little smaller than the left. He was ordered ten grains of iodide of potassium three times a day. On April 30th, distinct pulsation could be felt over the upper part of the sternum and costal cartilages on the right side. A bruit was also audible at the right second intercostal space and conducted into the subclavians. A sphygmographic tracing showed a curve with rather slow ascent and a well-marked round top; this was more apparent in the tracing given by the right radial artery. On May 22nd the patient was put upon Tufnell's treatment. At first he behaved very well, and at the end of a week the bruit was a little softer and the pain not so severe. The pulse, however, always remained rather rapid, varying from 90 to 110 per minute. About June 17th the patient began to complain that he could only lie upon his right side, for if he turned upon his back his breathing became much impeded, and he began to cough. By June 23rd he had become tired of lying still, and insisted upon sitting up in bed. His face soon became slightly blue and œdematous, and the veins of the neck were a little distended. All these symptoms gradually increased, the pain in the chest becoming so severe that he could not sleep without morphia.

On July 9th he was feeling rather easier than usual, but at noon he was suddenly seized with violent pain in the abdomen, became greatly collapsed, and bathed in a cold perspiration. He complained of numbness in his legs, and of inability to move them. No pulsation could be felt in either femoral artery, and both legs were cold and livid. At 6 o'clock the same evening he spat up some blood and gradually sank, death occurring at 10.30 P.M.

Necropsy.—Immediately above the attachment of the aortic valves the aorta was dilated, forming a large, irregular, but more or less spherical cavity, about the size of a fœtal head. The aneurysm involved the whole of the circumference of the artery from its origin to the beginning of the descending portion. Its walls were very thin, and very little laminated clot was found adherent to them; but the cavity contained a large quantity of soft dark clot in places indistinctly laminated. The remainder of the aorta was fairly healthy, but was completely filled by a soft dark clot terminating at the bifurcation of the aorta. On cutting into the clot, no portion of different consistence was found in its interior, the whole clot resembled very closely that found in the aneurysm. Besides some hæmorrhage into the substance of the left lung, there was no other pathological change.

Remarks.—The chief points of interest in this case are:—(*a*) The absence of any discoverable cause, and the age of the patient—viz., twenty-eight years; (*b*) the gradual appearance of the symptoms made the case very interesting to watch clinically; (*c*) the failure of the method of treatment employed was no doubt mainly due to the aneurysm involving the whole circumference of the aorta, and thus being very badly suited to the deposition of laminated fibrin; (*d*) the immediate cause of death was, no doubt, the detachment of a portion of the soft clot contained in the aneurysm and its impaction in the bifurcation of the aorta, followed by secondary thrombosis filling nearly the whole vessel.

CUMBERLAND INFIRMARY, CARLISLE.

LARGE IRREDUCIBLE UMBILICAL EPIPLOCELE; REMOVAL OF OMENTUM, SAC, AND REDUNDANT SKIN; WOOD-WOOL DRESSING; RECOVERY; REMARKS.

(Under the care of Dr. LEDIARD.)

THE patient, a married woman, first applied at the out-patient room with an umbilical hernia of large size, containing omentum and bowel, the latter only being reducible. The tumour had gradually increased in size since the date of origin—viz., six years previously. As the patient was seven months pregnant she was advised to return after her confinement, which she did upon July 9th, 1884. The pyriform tumour was central and about the size of a fist.

On July 14th an incision was made over the hernia, the sac opened, and the few adhesions which united the omentum to it were broken down. The omentum was then ligatured and cut away and the pedicle secured by catgut stitches to the margins of the ring; the sac was next separated from the cellular tissue and cut away, and the skin was also freely cut away so that a few stitches brought the edges together neatly over. A drainage-tube and some wood-wool was the only dressing used. The wound healed in two weeks.

Remarks by Dr. LEDIARD.—This is the fourth case of hernia treated in nearly the same manner. Two cases were small femoral ruptures, the sacs of which contained irreducible bits of omentum, and upon which the pressure of a truss was unbearable. The other case was an inguinal hernia the size of a duck's egg, containing adherent omentum. In each instance the sac was cut away, ligatured, and stitched to the margins of the ring. In all good recoveries were made, and the dressings were strictly antiseptic. It is especially desirable to obtain a radical cure in umbilical herniæ, on account of the increasing disability they seem to cause, and not disability only, for sooner or later they generally become a positive source of danger. The patient whose case I have given was but twenty-nine years of age, and future pregnancies may imperil the lasting success of the treatment. When the history of the rise and progress

of Listerism comes to be written one, by no means the least important, of the gains to be recorded will be the dating of the performance of operations which were formerly considered either impracticable or dangerous, and amongst these I venture to place hernise of all kinds, for in the future we shall hear more of the knife and the needle than the truss in the treatment of this class of ailments.

Reviews and Notices of Books.

Compendium der Pathologisch Anatomischen Diagnostik. Von Dr. JOHANNES ORTH. Dritte Auflage. (A Compend of Diagnosis in Pathological Anatomy. By Dr. JOHANNES ORTH. Third Edition.) Berlin: A. Hirschwald. 1884.

THE first edition of this useful work is known to English readers in the translation (New York: Hurd and Houghton) of Drs. Shattuck and Sabine; but so numerous have been the additions and so careful the revision that this third edition is practically a new work. Dr. Orth, who is Professor of Pathology at Göttingen, has made many contributions to the subject, and is at present engaged upon a handbook which promises to take a prominent place in the literature of this subject. The plan of the present work is that of a guide to the post-mortem room. It opens with general directions for the performance of post-mortem examinations and microscopical investigation, and then deals in turn with the external appearances of the body, cutaneous and subcutaneous lesions, before treating of the internal organs. The description of these latter is taken systematically with reference to the cavities of the body, the spinal canal and the cranium, the thoracic and abdominal cavities; and lastly the extremity is considered. Directions are given for the examination of all these parts before the detailed systematic description of the morbid anatomy of the various organs is entered upon. As an example of the method pursued may be cited the chapters dealing with the lungs. The lesions of the pulmonary pleura are first described, and the external characters of the lung as regards size, form, colour, and consistence. The method of incising the lung and the general characters of the exposed surfaces follow, with directions for microscopical examination of the fresh organ. The author then describes in turn the diseased conditions, commencing with disorders of circulation—hyperæmia, hæmorrhage, infarction—distinguishing with Rindfleisch between the "simple" infarction from rupture of vessels, and the "embolic," which leads to mention of metastatic suppuration and fat embolism. Pulmonary œdema closes this section. The varieties of pneumonia are fully described—fibrinous, catarrhal, suppurating, and caseous. As to caseous pneumonia, he distinguishes three main forms—caseous bronchitis or bronchiolitis, pneumonia proper, and caseous peribronchitis; holding apparently to the view that tubercle is a secondary event in these conditions. Under the head of "productive" inflammation is described cirrhosis of the lung in its various degrees. Specific inflammations follow, the chief being tuberculosis, which is described in the disseminated form, in the acute partially disseminated, and in the infiltrating or pneumonic form. He explains that the distinction of these varieties is arbitrary, and employed only for the sake of facilitating description, for he admits that they are one and all the result of the same virus, the "bacillus Kochii"; and he shows that all depends upon the sense in which the term "tubercle" is applied. Tumours of the lung, atrophic and degenerative changes (including emphysema), are next dealt with, which enables him to dwell at greater length upon the distinctive lesions of phthisis. The chapter closes with abnormalities in the amount of air (atelectasis) in the lung, foreign bodies (pneumono-koniosis) and parasites. A comparison with the former edition shows here, as in other chapters, how widely the author has departed from the arrangement there adopted, with the effect of rendering his descriptions more comprehensive and exact.

Post-Nasal Catarrh. By EDWARD WOAKES, M.D. Lond. London: H. K. Lewis, Gower-street. 1884.

THIS work is the first volume of the third edition of "Deafness, Giddiness, and Noises in the Head"; it treats not only of post-nasal catarrh, but also of the various diseases of the nose causing deafness. The author has taken great pains throughout this volume to establish a physiological theory, on the full understanding of which he attempts to explain all the phenomena met with in the region to which he has devoted so much labour and attention. Every theory or principle which may be held by any physician or surgeon is unquestionably open to attack, generally from more points than one. We do not care in this place to enter into an elaborate discussion of the *pros* and *cons* of Dr. Woakes' hypothesis, but we may state that his principle of reflex nervous action in the sympathetic nervous system may fairly be accepted as a tenable position, which, if perhaps taken up somewhat too positively by its promoter, will nevertheless stand many of the tests of a scientific examination. The brief chapter on chronic or post-nasal catarrh and its sequences is a graphic description of the symptoms from which the patient suffers, as anyone who has the misfortune to know from personal experience will testify. The section on the hygienic management of the catarrhally predisposed is one with which we find ourselves in almost complete accord. The author is in his element in treating of the diagnosis of chronic catarrh by the aid of the various appliances and methods of examining the fauces, nose, and post-nasal space. Fig. 4 however, does not convey much information to our minds of the normal appearance of the fauces. The pathology and treatment of acute catarrh are briefly but ably dealt with. The various forms of chronic pharyngitis are all considered, and taught as modifications of one and the same process. The chief varieties discussed are the chronic hypertrophic catarrh of the naso-pharynx, follicular hypertrophic catarrh of the pharynx, or follicular pharyngitis, and chronic atrophic catarrh of the naso-pharynx, or pharyngitis sicca. Chapter IX. is concerned with simple hypertrophy of the pharyngeal tonsil; and the opinion that "although it is possible to effect some slight subsidence in the enlargement of the pharyngeal tonsil by the repeated application of such styptics as nitrate of silver &c., this method of treatment gives only a partial result, and requires a long period to accomplish even this. Evulsion of the mass is the only measure in which confidence can be placed." Lymphoid papillomata of the naso-pharynx form the subject of a lengthy chapter, which deals with their etiology, pathology, and diagnosis in an able, and with their treatment in a practical, manner. Stenosis of the nasal fossæ is considered as resulting from (1) diseases originating in connexion with the turbinate bones, and (2) diseases originating in connexion with the nasal septum. Considerable space is occupied with the pathology and treatment of the various affections blocking the nasal passages. Taken in every way, this excellent manual is well fitted as a guide to the student of the subject of which it treats.

OUR LIBRARY TABLE.

The Asclepiad. Vol. I., Nos. 2 and 3. London: Eade and Caulfield.—This quarterly periodical is solely the production of Dr. B. W. Richardson, and evinces, it need not be said, considerable labour as well as ability; we wonder what fractional part of the author's labours these volumes alone represent. Dr. Richardson succeeds in making the material at his command both instructive and

interesting. We were much pleased with the articles on John Keats (with original portrait on steel), and William Gilbert, M.D. (with portrait and three illustrations). To the Useful Notes for Busy Practitioners, we have on several occasions referred elsewhere. There is a great deal of truth in the chapter on the Folly of Scepticism in Remedial Art, though we should not be disposed to grant the writer all his propositions. Upper London, a project for radical reconstruction, was an amusing address delivered before the Society of Arts. The even level of the roofs of the houses in that part of Regent-street known as the Crescent is certainly favourable to the suggestion of an Upper London.

Abstracts of Medical and Surgical Cases treated at the General Hospital for Sick Children, Pendlebury, Manchester. Manchester: J. E. Cornish. 1884.—This is the third year of issue of the abstracts, which are drawn up at considerable labour, and reflect much credit on the staff of the hospital. Special features are made of the cases of scarlet fever, diphtheria, rheumatism, tuberculosis, laryngitis, empyema, heart disease, nephritis, and tumours of the brain. A synopsis of seven cases of typhoid fever in children, treated at the hospital during the year 1883, is given by Mr. F. H. Mayo. An analysis of forty-four cases of croupous pneumonia has been drawn up by Mr. Chester Nance. Thirty-five cases of chorea have been analysed by Mr. Wilson. Dr. Ashby appears to be mainly responsible for the medical account, and Messrs. Hutton and Wright for the surgical cases. We hope for a continuance of these useful notes.

Series of Diet-rolls for Special Diseases. By HARVEY J. PHILPOT, L.R.C.P. London: Sampson Low, Marston, Low, and Searle. 1884.—This series comprises the dietetic treatment of diabetes, gout, and dyspepsia. It is good to have such a concise view of foods as has here been drawn up. The tablets ought to be of service more to patients than to busy practitioners. Every hospital physician must know how wearisome it is to repeat the accustomed restrictions of diet to diabetic, gouty, and other patients. We have often wished that slips were printed wholesale containing the name of every ordinary food in use, with a view to striking out by a few or many dashes of the pen those articles which are forbidden to each individual patient. We do not for a moment lose sight of the fact that no two patients are exactly alike in their alimentary requirements.

A Defence of Harvey. By GEORGE JOHNSON, M.D., F.R.S. London: Smith, Elder, and Co. 1884.—These twenty-three pages constitute a reply to a discourse delivered by Professor Scalzi of Rome in February, 1883. Dr. Johnson's answer appears more than a year later, for the simple reason that he was unaware of Scalzi's publication until it was recently pointed out to him by Sir James Paget. We recommend everyone who wishes to grasp the whole matter of the contention concerning the discovery of the circulation of the blood to peruse the clear statements so aptly laid down by the distinguished author of the Harveian Oration of 1882.

Handy Guide to Public Health. By THOS. W. HIME, B.A., M.B. London: Baillière, Tindall, and Cox. 1884.—An Act of Parliament is generally a cumbersome document, and it is especially so when it numbers several hundred sections; besides which, it needs, for the purposes of the majority, to be supplemented by notes, references, and explanatory comments. All this has been attained by the issue of Mr. Hime's elegant Handy Book of the Public Health Act, 1875; and more too, for its compass is such that it can be carried about with ease. It is supplemented by abstracts from other Acts, Orders, and Memoranda relating to matters with which medical officers of health and inspectors of nuisances have special concern; clauses not bearing upon their duties have been eliminated, and a good index is provided. The Guide is handy, as it professes to be; and it will certainly be useful.

Liverpool Medico-Chirurgical Journal.—The original articles in the current number are:—Surgical Treatment of Hæmaturia, by Reginald Harrison, F.R.C.S.; Cases of Bladder Diseases, by W. Alexander, M.D.; Local Treatment of Respiratory Organs, by Frederick T. Roberts, M.D., F.R.C.P.; Acute Yellow Atrophy of the Liver in Children, by Hyla Greves, M.B.; Syphilis and its Treatment by Erythroxylon Coca, by Fred. W. Lowndes, M.R.C.S.; Gout, by H. Colley March, M.D. All these articles well sustain the reputation of the journal. Mr. Greves' paper is a careful summary of all the principal facts and views concerning acute atrophy of the liver. Dr. Roberts' essay is an able and exhaustive account of the subject of local treatment of respiratory organs.

A Short Account of the Tercentenary Festival of the University of Edinburgh, including Speeches and Addresses delivered on the occasion. Edited by R. SYDNEY MARSDEN. Pp. 217. Edinburgh: Blackwood and Sons. 1884.—As we gave an account of the proceedings at Edinburgh on the occasion of the great festival, it is unnecessary to enter at any length into a notice of this book. We shall content ourselves with recommending it to the graduates and former *alumni* of the University as giving a brief but clear account of the proceedings and an accurate transcript of the speeches and addresses delivered on the occasion, most of them revised by their authors. We regret the want of an index to the book, which would have added greatly to its value.

New Inventions.

PERFORATED INDIARUBBER KNEE-CAP.

THE accompanying diagram is that of a knee-cap which I have recently applied with manifest success in cases of varicosity of the veins about the knee; also those recovering from synovitis of that joint, as well as enlarged bursæ patellæ, and in one case convalescing from transverse fracture of the patella itself. It is made of the ordinary rubber in one piece to any size, and is perforated over every half-inch of its surface. The advantages claimed by this over the usual appliances of silk and cotton elastic web in ordinary use seem to me to be: 1. That it gives a better and firmer support to the affected part, thus effecting a more speedy recovery. 2. It is more durable, and therefore less costly. 3. Being perforated, and, from its structure, more elastic, it keeps the part cooler, and exerts less undue pressure upon it. They are manufactured by Messrs. Mappin and Co., instrument-makers, New-street, of this town, who can supply any size.

Birmingham. HUGH THOMAS, M.R.C.S.

INTERNATIONAL CONGRESS OF SURGICAL AND ORTHOPÆDIC INSTRUMENT MAKERS.—The second annual meeting of the International Association of Surgical and Orthopædic Instrument Makers will take place at Dresden on September 14th next. The object of this Association, which was founded only last year, is to attain by mutual instruction the highest standard of excellence in the improvements of instruments and mechanical appliances, assurance of priority of inventions, and to exclude intermediate dealers, who from want of technical knowledge furnish instruments of inferior description. The Secretary, Mr. C. Walter-Biondetti, Basle, or Mr. C. W. Krohne, 8, Duke-street, Manchester-square, London, W., both members of the committee, will receive the names of persons desirous of assisting in the forthcoming Congress.

THE LANCET.

LONDON: SATURDAY, AUGUST 30, 1884.

ONE of the most important problems in respect to pathogenic micro-organisms is whether, under any conditions, these can be developed from organisms having no such specific quality. The statement has been made that such is occasionally the case, and the instance of the bacillus anthracis is quoted as affording proof of this. The importance of the matter is enhanced by the fact of attenuation of the virus, which has led to the adoption of measures of preventive inoculation. Again, the question was raised by Dr. KOCH in reference to the cholera bacillus, as to whether, under any conditions, this could have been transformed from a harmless variety. The latest contribution to the subject is that of Dr. KLEIN, published a few weeks since in an Interim Report to the Medical Officer of the Local Government Board, and the results of his researches may be summed up in the statement that there is no sufficient ground for the belief that septic can be transformed into pathogenic organisms. At present he says it is a debated question whether an organism which under ordinary conditions is only to be met with in association with putrefaction, can under extraordinary conditions become endowed with the power of growing and multiplying in the body of a living animal so as to induce therein an infective disease. If the converse can be proved—viz., that a micro-organism known to be pathogenic can be made to lose its property, ground might be given for that conclusion. The instance of the bacillus anthracis and its attenuation is shown by Dr. KLEIN to be of less significance than is supposed, for he finds that when new cultures are made the bacilli retain their full virulence. At the same time the fact that these bacilli do apparently lose their pathogenic activity is undoubted, and it is explained by Dr. KLEIN by the assumption that such a change is not an intrinsic one, but in all probability due to the bacilli appropriating, under certain conditions, some chemical substance or ferment which produces a weakening effect upon them; and that the immunity conferred upon some animals depends upon the restraining influence of this substance on the activity of the bacilli. He quotes in support of this the attenuation produced by the addition of carbolic acid or bichromate of potash to the nutrient medium in which bacilli are cultivated. The inhibiting material, probably of various kinds and nature, does not operate in preventing spore-formation or in checking the growth of the bacillus. Nor does it modify the virulence of subsequent inoculations with other fresh bacilli, so that on this view protective inoculation with "attenuated virus" is reduced to a vanishing point.

Dealing next with the three alleged examples of the conversion of a putrefactive or septic organism into a specific or pathogenic one—viz., BUCHNER'S view of the transformation of the hay bacillus into bacillus anthracis, the assumption of pathogenic properties by the bacillus subtilis in jequirity infusion, and of aspergillus when grown in neutral and alkaline material—Dr. KLEIN in the first place points out that the hay bacillus differs morphologically from the anthrax bacillus, and also in its mode of growth and action in culture fluids. He deals with BUCHNER'S arguments in turn, and proves that KOCH was right in rejecting them, and that the alarming doctrine that the hay bacillus is capable of being transformed into the pathogenic anthrax bacillus is chimerical. Each of these organisms is distinct from the other during its whole existence, and the only explanation of the error that has been made in arriving at a different conclusion is that of accidental contamination. Dr. KLEIN gives instances of the remarkable way in which such contamination can take place without the experimenter's knowledge, and amongst them he quotes the erroneous conclusion respecting the artificial production of tubercle in rodents by non-tubercular substances, which were quite upset when sufficient precautions were taken to avoid such contamination. Nothing illustrates better the extreme care that is required of the experimenter in his researches on these microscopic and ubiquitous organisms; and how a quite unintentional oversight may vitiate the whole result and lead to the formation of a quite erroneous conclusion. Then as to the jequirity bacillus, concerning which so much has lately been written, owing to the practical use to which this substance has been applied in exciting ophthalmia, Dr. KLEIN shows that *per se* this organism (the bacillus subtilis) is as powerless to create an infective ophthalmia as BUCHNER'S hay bacillus is to cause anthrax. For by taking suitable precautions he has obtained a perfectly sterile infusion of the jequirity seed, and has shown that this possesses the property in question. Further, he finds that after a very short exposure to the air this infusion contains a large quantity of bacilli derived from spores floating in the air, and that boiling which deprives jequirity of its poisonous action does not destroy the spores. To Dr. SATTLER'S statement that cultures of the bacillus can excite ophthalmia, Dr. KLEIN urges that this must have been due to contamination with some of the original jequirity infusion, for by isolating the bacillus and cultivating it through two generations he was unable to produce any poisonous effects. Lastly, as to the aspergillus, which GRAWITZ showed to have infective properties when injected into the blood, he concurs with KOCH and GAFFKY in the belief that certain species of this fungus possess pathogenic properties *ab initio*, whereas others are non-pathogenic, and can never acquire such properties. Similar explanations hold for the forms of septicæmia and pyæmia produced in mice and other animals by injection of putrid organic substances—namely, that such infection is due to organisms that are pathogenic throughout, but capable, like the anthrax bacillus and the micrococcus of erysipelas, of growing outside the animal body. A final section of the report details the negative results (*quoad* pathogenic action) obtained by inoculations with various forms of non-pathogenic micrococci and bacteria. In these experiments the singular result was found that inoculations of bacillus subtilis in mice were followed by a fatal pyæmia; which, however, on examination was proved to be due to the presence of a micrococcus, that obviously could not have been derived from the bacillus, but must have been introduced accidentally when the

latter was inoculated. As a contribution to a very vexed question, and as supporting very strongly the notion of specificity under prevailing conditions, these researches of Dr. KLEIN deserve careful attention.

DR. MOXON'S picturesque sketch of the character of the late HILTON FAGGE is as full of truth as it is of humour. It would be easy to compile a chapter of aphorisms from the columns we print elsewhere, and each might be made the text of a homily for the edification of medical men. We scarcely know which most to admire, the subject of the sketch or the work of the sketcher. This much we must be allowed to say before we proceed to jot down briefly a few of the thoughts which the perusal of Dr. MOXON'S paper has suggested.

"Five-sense philosophy" is beyond question the true definition of science as it falls within the ken of the medical student and practitioner. To see clearly, hear distinctly, and bring all the organs of the life-of-relation to bear on the subject matter of study and work, is the duty, the privilege, and the safeguard of the physician. To be able to do this worthily is to be what Dr. MOXON aptly calls "a physician by grace of nature." Meanwhile something more than this is necessary if the physician is to be great in a true sense. There must be "the identification of self with interests that are socially constructive and positive and real." This is a sentence that should live. It is pregnant with the soundest of good sense. It goes right inside things, and takes a human view of facts and the world and nature. It does not prate of "unselfishness" or "self-sacrifice," those utterly absurd and canting hypocrisies of a maudlin moral sentiment, but sees clearly, and candidly admits that a man must be selfish—if he be a human creature; and only asks as the proof and fruit of his greatness of mind that he shall identify his selfishness, his self-seeking—let us be plain—with social constructive and positive and real interests. How much more forcibly does this appeal strike home to the consciousness, and how much greater the influence it exerts on the will and the life, than mere vague platitudes about the grace and beauty of unselfishness! It seems to say to the heart honestly and intelligibly, This is the way; walk ye in it.

As Dr. MOXON justly affirms, "It is so tawdry easy to be free and negative." If nothing more than an odour of sanctity and a halo of sentiment were needed to make a man good and great, educated folk who have been decently indoctrinated would be paragons of virtue all the world through and in every profession! To be *positive* is altogether a different and higher attainment, and few there be that achieve it. The truly great physician must be gifted with not one but all the five senses, and he must have them, or their inner counterparts, in the intellectual being, properly concerted for action under the directive and protective guidance of a well-balanced mind. Then he must be thoroughly honest, and as patient and persevering as he is energetic. It is one thing to be able to see truth, and another thing to understand it; and yet another to love and reverence it for its own sake. The true scientist has nothing to do with the "limbo of faithless questioning and faithless doubting" which lies beyond the reach of a "five-sense philosophy." It is strictly true of that limbo, as Dr. MOXON puts it, that therein "the luxury of doubting makes science as impossible as it makes religion." The true man, who is also a scientist, never wanders over the borders of that limbo, because he simply goes as far as his five senses will carry him, and not a step further. He does not deny that there may be things beyond his reach. He is quite prepared to believe that "if GOD had given us two or three more senses we should have experienced just so much more" of the analysis and the revelation of nature, as those additional faculties were able to appreciate. He is not free and negative, and therefore he does not feel at liberty to affirm a negative. He humbly accepts the known, and without superstition pays reasonable homage to the unknown.

Those who do not think—and there are too many of us to whom real thinking is a rare exercise of the understanding—have no adequate notion of the nature and qualities of true greatness in medical life and work. It is one thing to have a grand "action"—as a horse may have,—but quite a different thing to be really grand. The two qualities are not only separable, but often separated; we might almost go the length of saying that they are seldom found together. Just as the advanced scientist is seldom a practitioner, so the man who has been endowed with those powers which fit him for the discovery and collocation of facts is not, as a rule, also found gifted with the faculty of using his gifts as "traps to fortune." And as a "belief formed on sense-knowledge" saves from metaphysics, "which is mental humanity floundering with eyes all round the back of its head," so the earnestness that inspires by a consciously "sure grasp of the reality and the practical significancy of truth" renders the mind incapable of stooping to the commercial enterprise of packing and retailing small parcels of truth as a marketable commodity. It is not so much that the wholesale dealer is superior to the petty shopkeeper, as that he is so engrossed with broad views and large considerations that he cannot bring his mind to the narrower and smaller subjects of thought and purpose. Both the merchant and the shopkeeper are good and necessary in their respective places. The retailer and adapter of knowledge is as much in request, and rightly so, as the collector and comparer of facts and the drawer of inferences; but the two are distinct. If there be a defect and danger in the genuine hero-worship which prevails, and must always prevail, among the disciples of true greatness in science, it lies in the failure to recognise that giants would cease to be great if the average stature of man were equal to the ideal of our idolatry. It is neither necessary nor reasonable to condemn the mice on the score that they are not lions, because sometimes the lion may be indebted to the mouse. The great physician may be indebted to the little practitioner. It is not given to every good and earnest man to be a head and shoulders taller than the rest of the people; but it is none the less to the advantage of all to look up to the truly great—men like HILTON and FAGGE, whom Dr. MOXON so truly and eloquently characterises as "men in whose presence the faculty of imitation was a blessing, and made a better man of you."

THE Health Exhibition has much to answer for. Amongst the rest it is responsible for a very warm discussion on the merits of Alcohol. A leading contemporary had it in its

power to allow that delicate question to sleep. But it is a tempting one in the dull season; and the temptation proved too great to be resisted. Accordingly, coincidentally with the summary of the session, *The Times* published a very able digest of the alcohol question, decidedly from another standpoint than that of the humanitarian or the teetotaller. The writer argued that the dominant nations have all used alcohol in some form or other. Those who wear the badge of abstinence are obviously persons of inferior physical development, and, so far as they can be judged by facial expression, not "remarkable for intellectual power." The best work of the world is done by moderate drinkers, and, as far as we are aware, the work of total abstainers is of a very commonplace kind. Barring cases of manifest disease, drunkards now are either professional criminals, who had better be drunk than sober, or persons of slender self-control, who are ready at any time to lapse into criminality. There may be half a million such, and they are so worthless as to make it wrong for the remaining twenty-nine millions and a half to exchange moderation for abstinence on their account, or with the vain hope of doing them any good. Such people drink on account of a morbid state of the nervous system, inherited or acquired. When reclaimed by teetotalism, they are striking examples of its power, but the ordinary experience is that after many relapses they ultimately die, directly or indirectly, from the effects of drink. On the whole, the writer concludes that the teetotal societies do very little good and a great deal of harm. It was not to be expected that such a summary of the alcohol question as this could be accepted by the teetotal section of the community without much pain and protest.

It is to be regretted that on each side of this controversy there seems an indisposition, almost a determination, perhaps an incapacity, to see the best points in the argument on the other side. It appears almost as if there were something in the nature of alcohol that affects all who think about it, even those who abstain from it, with a kind of intemperance. The intemperance of teetotallers has greatly hindered the cause of temperance. Their denunciations of moderation and of moderate drinkers have estranged whole classes of men that would have brought strength and help to the cause. Their dogmatism about what constitutes food and what poison, and about the injurious effects of every drop of alcohol, has excited ridicule and laughter rather than intelligent interest. Their refusal to see that many who are not against them are on their side, and their general attitude of superiority, have been most unfortunate. By such an attitude the medical profession has been prevented from hearty co-operation with those who see in the drunkenness of the country a gigantic evil and disgrace, to be remedied at any cost short of that of talking nonsense. Similarly, a large section of ministers of religion have been obliged to stand aloof from those who, against Scripture, common sense, and examples of the good in all ages, have refused to recognise in wine and its congeners things capable of use as well as abuse, and things to be reasoned about calmly in the light of experience and science.

One result of this extreme position on the part of teetotal reformers is to bring down on them and their cause such cold water as the article which occasions our present notice of alcohol and its *rôle* in human life. We cannot much approve of the article in our contemporary, but it is rather of its tone and spirit than of its substance that we have to complain; rather with its scant and reluctant praise—its actual dispraise—of men with a great cause and with good motives, than with its scientific propositions, that we have to quarrel. The world is not so much in danger of neglecting to take a proper amount of alcohol that it needs three or four columns of ingenious argument to prevent it falling a prey to indigestion and nervous exhaustion from drinking water alone. But the excuse for such writing would be less if there were a little more reasonableness and temperance on the part of those who seek to abate the national consumption of alcohol. Their case is by no means so contemptible, logically and medically, as the writer referred to above would make out. There are some very good-looking fellows among them; they are not by any means intellectually contemptible; they live quite as long as, if not longer, than other people, and escape many diseases that affect others, though they have their own liabilities; they are good workers. There may not have been yet a teetotal SHAKESPEARE or MILTON—there has not been time;—but much of the best work of the world now-a-days is done by men who either do not use alcohol or use it in such quantities as to be inoperative physiologically or pathologically. And the common work of the world is done well by abstainers; they are industrious, reliable, healthy. According to Lord WOLSELEY they make good soldiers. Sir WILLIAM GULL has said that "it is one of the commonest things in our society for people to be injured by drink without being drunkards. It goes on so quietly that it is very difficult to observe. To the professional eye the effect is perfectly marked and distinct." Many other eminent men have given similar testimony. So that there is an amount of drinking deemed moderate by society which, in the opinion of judges, is very injurious to the liver, the lungs, the nervous centres, &c. Further, the actual impression made by the teetotal school on public opinion and social habits is considerable, so that sensible men do not take stimulants in the quantities they used to do, or on an empty stomach and without food. No doubt much of this is due to sounder medical science and to the extreme moderation of medical prescription and example. But part of it is due to teetotalism and to religious efforts to promote sobriety, which it should be the desire of everyone to second, the more so as there is still a frightful amount of ignorance abroad as to the impunity with which alcohol, even in strong forms, may be taken into an empty stomach. A physiologist may still be shocked every day in a restaurant or a railway refreshment room—of course physiologists never go into public-houses—by seeing young men order and toss off without thought and without food glasses of spirit more or less raw. He knows how infallibly and how quickly that leads to mischief. But for evils and follies like this there is room for common protest and effort, apart from intemperate doctrines of teetotalism on the one hand, and too easy disparagement of those who hold them on the other.

UNDER the title of "A Romance of War, or how the Cash goes in Campaigning," Dr. CAMERON, the Member for

Glasgow, has published a brief summary of the facts brought out in evidence before the Select Committee of the House of Commons, which, on his motion, was appointed to inquire into the working of the Supply and Transport Services in the Egyptian campaign. He has adopted this somewhat unusual course in anticipation of the publication of the Report of the Committee, in consequence of an article in *The Times*, which, it was clear to him, "was directly inspired by the War Office," and in which the correspondent asserted "that with regard to failures in the working of the supply and transport services at the seat of war the evidence seemed to show that there was none," and that "it seemed manifest that the expedition as a whole was, from a purely administrative point of view, a success." A perusal of Dr. CAMERON'S pamphlet has led us to a very different conclusion, for it would be difficult to imagine a more complete picture of rascality, incompetence, ignorance, and mismanagement than is there represented. It would be beyond our province to go into the whole question, but we may note what he has said regarding the Medical Transport. The mules, which had been trained for *cacolets* or litters for ambulance service, were taken to make up regimental transport, and replaced by untrained animals from Spain. These on arrival at Ismailia were at once appropriated to the important work of dragging trucks on the railway; and when the principal medical officer applied for others, in anticipation of the battle of El Magfur, he got only fifteen, and these so utterly unsuited for the work that he would not allow any wounded men to be placed on them. Dr. CAMERON sums up the history of this branch of the service in these words: "Inability to move forward field hospitals for want of transport, and army hospital corps taken away from their proper duties to remedy, as far as they could, the want of transport and labour." Dr. CAMERON exonerates the Commissariat and Transport Department from much of the blame attached to the shameful mismanagement and blundering which took place. The head of the department was not consulted as to the purchase of stores or transport animals, nor in the selection of carts or shipment of stores; his request for labour was disregarded; and when, on appointment, "he busied himself with suggestions and demands, he was given to understand that his interference was not desired." The officers of the Department very fairly complain "that under the existing system, in time of war they are debarred from performing the duties to which they are trained in time of peace, and are blamed for the miscarriage of supply and transport arrangements, in carrying out which they have had no voice." In an appendix Dr. CAMERON has pointed out the waste and extravagance which occurred in connexion with the transport service in the Afghan War. The facts which he has brought before the public in connexion with these two expeditions will, we trust, compel the War Office authorities to consider carefully the whole question of commissariat and transport arrangements, and lead to the introduction of a system which may be relied upon in the hour of danger, so that our troops may not be placed in circumstances similar to those in the Crimea and Egypt whenever any unusual or unforeseen event may occur in the course of field service. Dr. CAMERON is entitled to great credit for the persistence with which he has followed out this inquiry, and we most sincerely trust that his labours may be followed by those improvements in organisation and working which he has been so anxious to see introduced into our army.

THE principal points secured by the Amended Canal Boats Act are the registration of such boats and the maintenance of the education of children connected with them. Provision is made for frequent inspection by local registration and sanitary authorities, and by the Education Department, with the presentation of annual reports to Parliament directly or through the Local Government Board. The enactment of these regulations, by giving efficiency to a measure at one time too loosely administered, has supplied a want which cannot be said to have been unfelt because perhaps not fully realised by the nation. The registration and supervision of inland water traffic are at certain times and in several ways not less important to the public interest than those of the mercantile marine. On July 5th we drew attention to the obvious bearing of such a system on elementary education and on the detection of crime. With reference to school instruction particularly, it must be clear to all that without some special action on the part of the Government, many, if not most, of the boat children must grow up in ignorance. The difficulty of obtaining regularity of attendance is not considerable, even in the most settled circumstances, but it is greatly increased when to many accidental causes of absence is added the fact that the home itself is a ready means of transit over wide areas. Under no conditions, however, is it likely that the beneficial operation of the Act will be more apparent than in the presence of infectious diseases. Foci of population are, of course, foci of diseases, and not only of such as are endemic, and in so far autogenetic, but in the case of commercial towns of exotic and epidemic maladies which come to them as the accidents of trade. The good effect of inspecting the state of health of merchant vessels has been well shown in the prevention of the spread of cholera which recently approached one or two ports on our own shores. The control of the next link in the invasion of an epidemic, the commercial centre, is carried out by the sanitary department. It is no less necessary that the further communications with the interior of any country should be controlled with equal strictness, and of these the inland waterway is perhaps the most important. The canal population while under cover is peculiarly subject to the hurtful influence of overcrowding, bad ventilation, and restricted means of cleanliness. Clearly, then, if disease be planted and reared in circumstances so favourable to its growth, the results may be understood without description. Everything relating to these boats, therefore, their starting point and destination, their crew, cargo, and accommodation, and not less their disposal of refuse and their use or abuse of the waterway for this purpose, are matters of much and general consequence, and justify the official regulation which they have received.

SURGEON-MAJOR FERNANDES, of the 3rd Battalion Grenadier Guards, was on the 21st inst. at Dublin acquitted on the charge of felony, the jury expressing the opinion that the accused left the Court without the slightest stain on his character.

Annotations.

"Ne quid nimis."

"LEGACIES TO THE HOSPITAL SUNDAY FUND."

DR. WAKLEY'S suggestion that benevolent persons who have money to bestow should leave it to the "Hospital Sunday Fund" instead of to particular hospitals is eminently practical, and we are convinced that, on consideration, it will be found to be sound. It is impossible that any individual, however judicious, should be able to arrive at so good an estimate of the work of a hospital as a committee having for its permanent function the consideration of the claims of the hospitals generally to pecuniary assistance. It must be obvious that the Council of the Hospital Sunday Fund is peculiarly well placed for the formation of correct judgments on the cardinal points of a hospital claim—namely, its value to the sick poor, its service in the cause of science and consequently of the public, and the wisdom and fidelity of its administration. It will be of great and lasting advantage to the interests of humanity if Dr. Wakley's suggestion is accepted and acted upon. We can readily understand that, on the first blush of the case, it may seem more congenial to the feelings of a testator to make his own choice of a charity to which to leave his bequest; but on reflection it will be perceived that the wisest course must be to entrust the duty of distributing aid to a responsible committee able and willing to make the best possible use of any fund for the general advantage. The recommendation is as simple and obvious as it is just, and neither argument nor explanation is needed to enforce it.

THE ORIGIN OF SEA-BATHING.

THE sea was held in dread by classical antiquity; immersion in its waters was an experience to look back upon with a shudder; and the Greek or Roman who came out of it alive repaired to the nearest temple, and there suspended his dripping garments and a votive tablet to the forbearing Poseidon, or Neptune. This horror of the sea descended to mediæval times, when indeed ablutions of every kind were almost dispensed with, and the human integument so sparingly refreshed with fair water as to earn for the Ages in question a double title to Dark. A compulsory dip in the sea was a sentence sometimes passed on the mediæval offender, often with exemplary effect. The legend has it that a first-class misdemeanant, who, though ill at the time, was visited with this penalty, emerged from it so much the better physically as to shake belief in its deterrent virtue. Ronsard, the French poet and scholar, sang the praises of the ocean and its health-giving waters, but this was only a faint and far-off anticipation of its modern worship. It was in England and towards the middle of last century that the sea was first recognised as the mighty sanitary agent the world now acknowledges it to be. At that time Western Europe was heavily scourged by scrofula—king's evil, as it was called—and all ranks of society, from peer to peasant, were more or less sufferers. Dwellers on the seaboard, guided by instinct apparently, drank of the briny water, bathed in it, washed their sores in it or bound them up with seaweed. And they had their reward in physical as well as moral invigoration. The profession took note of this practice, and Dr. Russel, a Court physician, who was the first to become cognisant of it did not wait for a chemical or physiological theory of its efficacy, but prescribed it at once to his patients, and was followed by others of his contemporaries. Soon the English coasts were planted with villas and cottages; and hamlets, from their sea-bathing advantages, expanded into towns. At the close of last century Germany imitated England, then Belgium, then France, until in the year 1812 Dr. Lefrançois of Dieppe published a treatise on the internal and external virtues of sea-water, and raised his native town into a much-frequented health resort. So that from having been first used in scrofula, the touch of ocean is now employed in countless other evils than the "king's"; and invalid Britannia repairs, with yearly recurring alacrity, to the waves over which she rules.

EXPERIMENTAL NEURITIS.

CLINICAL observations of motor and sensory paralysis, in certain cases, after the hypodermic injection of ether, have led MM. Arnozan and Salvat to study the action of ether and cold on the peripheral nerves. The first experiment was made on the left sciatic nerve of a guinea-pig by exposing the nerve and isolating a few centimetres of it on a thin strip of cardboard. Under these circumstances the application of a feeble electric current induced pain. By the aid of a drop measure ether was instilled over the nerve for thirty minutes. The nerve was then replaced and the wound sutured. The next day and the day after there were manifest signs of paralysis and loss of sensation in the left hind limb. At the necropsy the wound was found to be free from suppuration, and with the exception of redness of the nerve at the site operated on there was no disease in the limb. Sections of the inflamed nerve showed segmentation of the myeline. In the second experiment the right sciatic nerve was simply exposed to the air for half an hour. The sensibility of the corresponding limb was a little lowered and the movements were a little weakened; these disorders passed away in a few days. Some days previously, however, the left sciatic nerve of the same guinea-pig had been isolated, but instead of simple exposure to the air it was surrounded with ice for half an hour. At the end of that time, though the edges of the wound were not anæsthetised, yet the sensibility was notably diminished in the limb below the part operated on, and the muscles supplied by the nerve were paralysed. At the end of four days the sensibility had returned to the normal and the muscular paralysis had passed away; moreover, after some weeks the faradaic reactions of the muscles were quite natural. Nevertheless, trophic lesions were observed. The limb was at first much wasted, but this did not last. The hair had all fallen off around the wound fifteen days after the operation. At the same time ecchymoses were seen on the left heel, which afterwards became ulcerated. All the nails of the foot were shed. Later, the ulcer healed, the hæmorrhage disappeared, and the limb became sound. No signs of neuritis were discovered microscopically after the animal was killed. The authors point out the interesting observation that the trophic troubles lasted much longer than either the sensory or motor paralysis.

TWIG AND TREE.

"JUST as the twig is bent the tree's inclined." Pope's monumental verse inspires philanthropic effort in every stratum of society, from the crusade against overpressure in schools to the various attempts at organising a moral *orthopædia* for the development of the boy into the man. The impressionable and plastic nature of childhood is not secured against distorting influences by surveillance over its school-life only. At home much remains to be done and much is disastrously done in the moulding of early character, and in determining the career of ingenuous youth. The Society for the Prevention of Cruelty to Children just formed at Glasgow hits a blot in our educational system, and deserves imitation wherever the juvenile population, of the lower strata especially, is numerous enough to overtax the control of schoolmaster, clergyman, and parent alike. The diffi-

culties thus engendered in humbler families occasion nine-tenths of the cases of maltreatment which come from time to time before the magistrate; just as in lunatic asylums where the surveillance is insufficient the much-exercised keeper is goaded into acts of cruelty to intractable inmates. The maltreatment of children, however, has its passive as well as its active side, and it is questionable whether absolute neglect of them is not more prejudicial to their development and future well-being than the savage usage they encounter from evil-tempered parents. The Earl of Glasgow, who presided at the first meeting of the Society above mentioned, dwelt ably on the problem it it had set itself, of which he indicated a threefold solution. Legal coercion may prevent the maltreatment of children; in difficult cases knowledge gained by careful study and experience of the scope of existing laws may be effectively applied; while moral suasion, exerted, for example, on too indulgent or practically negligent parents, might come in abatement of their co-operating with the children's dislike to school or of their failure to check premature smoking and drinking, those frequent causes of diseased development, physical and moral. The Society, Lord Glasgow was careful to show, sought in no sense to supersede parental responsibility; but, on the contrary, to enlighten and to stimulate it. It further dissociated itself from all attempts to interfere with the religion of the children within the scope of its operations; nay, protection of their faith, as well as protection of their persons, was part of the Society's programme. That programme is, indeed, in the best acceptation, a humane and enlightened one, and we are confident our professional brethren, wherever a similarly instituted Society may spring up, will give it the sympathy and the co-operation they have never withheld from any nobly intentioned and well-organised undertaking.

TUBERCULAR SEROUS EFFUSIONS.

AN experimental study by MM. Chauffard and Gombault of the virulence of certain pleural and peritoneal effusions is still in progress, though a preliminary report has been published in the "Bulletins et Mémoires de la Société Médicale des Hôpitaux." These observers, having never been able to discover the bacillus tuberculosis in peritoneal or pleuritic effusions, which were obviously of a tubercular nature, determined to employ the experimental method. Instead of making use of the artificial cultures, as recommended by Koch for the demonstration of the bacillus, they resorted to the living organism, and for the most part the guinea-pig. The *raison d'être* of these researches is easily told. If the bacilli be present in the morbid fluids, but are so sparsely scattered that their histological demonstration is almost impossible, the method of cultivation so as to increase and multiply their number is obviously the plainest way out of the difficulty, seeing that the bacillus cannot multiply if it be not present. Injections of the serous fluids have been performed in the subcutaneous tissues of the guinea-pig by means of a Pravaz syringe or Potain's apparatus. Super-heating the trocar and needle and repeated washing of the instruments with antiseptics were the precautions used. About three cubic centimetres of the serous fluid were injected into the peritoneal cavities of a number of guinea-pigs. The animals were killed at intervals of two, three, or four months. Twenty-three guinea-pigs and twenty-one serous effusions were employed in the first series of experiments, one patient serving to inoculate three animals. The fluids inoculated were either serous, sero-fibrinous, or purulent. Of the twenty-three inoculations, four gave no result, the animals having died rapidly. In nine, the autopsy made at the end of three or four months revealed no tubercular lesions. Ten gave a positive result, the necropsy discovering miliary and yellow tubercles, as well as infiltrations, in the liver, spleen, and lung. The spleen was always considerably enlarged, and a number of mesenteric and peritracheal glands were swollen and partly caseous. The great omentum was also infiltrated. Sometimes there were lesions of the intestines, and also of the genital organs. The kidneys were usually spared. Characteristic bacilli were discovered in all the cases where macroscopic tubercular disease was present. The existence of widespread lesions of tubercular appearance and the detection of the bacillus were taken as sufficient criteria of tuberculosis, so that a further series of inoculations was not undertaken. Of course Gombault and Chauffard believe the tuberculosis to have been due to the inoculation. All the inoculated animals lived together in three or four hutches, and with them a certain number of non-inoculated ones to serve as test experiments; none of the latter became tuberculous. That the mere puncture could hardly have been the cause of the tuberculosis was shown by the escape of nine animals. M. Déjérine, joining in the discussion which followed the reading of the paper, said that he had succeeded in demonstrating the bacilli in purulent effusions by allowing the fluid withdrawn to stand, and then, decanting the liquid, to search in the lower strata for the bacilli. M. Gombault admitted the facility with which bacilli in purulent fluids were demonstrable, but said that decantation failed when serous or sero-fibrinous effusion had to be dealt with.

THE SANITARY STATE OF WIGAN.

THE sanitary state of Wigan is, according to the statistics published by the Registrar-General and to details given in the local papers, deserving of very serious attention. Scarlet fever has now for many months past been widely prevalent throughout the district, and, in a population of some 50,000, the deaths from this cause alone have numbered 67, 61, and 58 respectively during the past three quarters. What the efforts which are being made to check the progress of the disease may be we cannot say, except in so far as they include some measures of school closing and disinfection; but it is very certain that the principal measure by which the outbreak should have been met at the onset—namely, effective isolation—could not possibly have been brought to bear upon the extending disease; for Wigan, with its large population, has only for an infectious diseases hospital an old villa, with three available bedrooms. The startling mortality from scarlet fever has led to revelations concerning "Insanitary Wigan," and to conditions of housing in connexion with prevalences of enteric fever, which, if not exaggerated, reflect the reverse of credit on the sanitary authority. In a street leading out of Frog-lane, for example, a correspondent of the *Wigan Examiner* finds twenty-one cases of this disease. In a district called Scholes, with its "damp alleys, its damp and decayed houses and one-roomed inhabitants, who herd and are packed together like negroes in the middle passage," the sanitary conditions as described are of a revolting character. Stopped-up drains and sewers, stagnant and offensive filth, garbage in an advanced state of putrefaction, liquid manure, open middens and closets, &c., were met with, all indicating that, whatever nuisance inspection may be carried on, little is done towards preventing the recurrence of nuisance by adequate permanent works and structural alterations. The overcrowding which exists in this locality must be as subversive of all decency and morality as it is opposed to physical health. In one place, a man and his wife, with their family of young men and maidens, whose ages varied from eighteen to twenty-seven years, all slept in one filthy, grimy room. Elsewhere, a man aged thirty-six and a girl aged eighteen slept in the same dormitory with their parents. Again, two young men and their wives and a young unmarried woman of twenty-two years of age occupied one small sleeping apartment. This

certainly is a state of things which should be put an end to. Section 90 of the Public Health Act, and the corresponding section of the Sanitary Act of 1866, were specially framed to meet such conditions; and it behoves the corporation to secure without delay such supervision of houses so sublet as shall lead to the abolition of such intermingling of sexes as has been described. The necessary bye-laws and regulations are also urgently needed in the sanitary interests of the houses and of their occupants.

DR. SHOEMAKER'S OLEATES.

IT would be difficult to over-estimate the value of the different oleates and oleo-palmitates in the treatment of various forms of skin disease. The subject is by no means new, but attention has been directed to it of late by papers and experiments recently published by Dr. Shoemaker of Philadelphia. In THE LANCET of July 19th we gave a full report of a lecture on this subject delivered by him at the Westminster Hospital. His oleates are prepared from the sodium oleate by a process of double decomposition, and it is claimed for them that they are definite chemical combinations, differing entirely from the old so-called oleates, which are nothing more than solutions in an excess of oleic acid. These new oleates are undoubtedly very useful compounds, and it is probable that many of them, at all events, will come into extensive use. The zinc oleate is a fine pearl-coloured powder resembling French chalk, and when mixed with a small proportion of thymol forms an excellent dusting powder for all kinds of excessive sweating. The oleate of copper is used in the treatment of ringworm and other parasitic skin diseases; and it is said to be a good application for freckles. The mercurous oleate is found to give good results in plantar and palmar psoriasis, and in old cases of eczema, especially when the integument is hard, dry, and thickened. The oleate of bismuth is a bland, soothing application adapted for the treatment of acute eczema and other inflammatory conditions. There are some twenty or thirty oleates in all, each having its special use and sphere of action. The oleates of various alkaloids have been prepared, but they are of comparatively little importance, and their therapeutical indications are as yet not well established.

THE VACCINATION PANIC IN LEICESTER.

IT is to be hoped, in the interest of Leicester and of the whole country, that the waywardness of that town in regard to vaccination has reached its height. Twelve hundred persons are awaiting trial, and others are now undergoing terms of imprisonment, for having evaded the Act. In such a case there is but one course open to the authorities—namely, to execute the law with just though moderate firmness. It cannot be permitted that one town, even though not large and protected from contagion in some degree by its comparatively secluded position, should become the possible centre of an epidemic. At the same time all must regret that compulsion should be required to support a measure of the undoubted practical value of vaccination, and those who know the characters of small-pox and its history in this country must be driven to the conclusion that this, its only remedy, has been resisted by some simply because its successful operation has shorn the disease of much of its terror. There can be no question that the opposition in Leicester rests chiefly upon misunderstanding. It has been maintained by agitation, conscientious enough, perhaps, but inspired by misinterpretation and irrational feeling, which would seek to fix on vaccination the discredit due to neglect or constitutional fault, and in no way connected with it. In these days every facility is afforded to the qualms of diffidence. One may be vaccinated where, by whom, or from whom he chooses; he may go to the infant or the calf, and may adopt almost any measure he pleases to satisfy himself of his security. In the face of all this consideration—we might say unnecessary consideration—for nervous apprehensiveness and of the essential safety of vaccination itself, the rebellion in Leicester must appear to most people as meaningless as it certainly is injurious. We recommend all who now oppose this practice to consider the subject from every point of view and with every kind of proof, and we do not doubt that they will then admit that a custom which has fairly won and holds its ground in every civilised country does not deserve, as it never can experience, the swift perdition to which they would consign it.

DISUSED BURIAL GROUNDS.

THE Disused Burial Grounds Act, which has for its chief object the prohibition of building within the spaces described in it, is a fairly complete measure, though not in our opinion quite perfect. Certain buildings which are required for purposes of worship are exempted from the prohibition referred to. The advisability of any such exemption is open to question, inasmuch as the opening of graveyards, even after long disuse, has in several cases been followed by outbreaks of local disease, referable to no other cause than exhalations from the disturbed sites of burial. Any risk from this source is necessarily increased if excavations should happen to be made during the prevalence of infectious disease in a district. In any case where such excavations are carried on, it should be a part of the duty of the sanitary authority to superintend them and to take whatever measures may be necessary to obviate all danger to health from the burial ground itself, or from the use of the building erected on it. We cannot leave this subject without once more recommending that as many such vacant spaces as possible may be left free of buildings, and converted into playgrounds, with appropriate means of amusement for the many town children who might profit by such an arrangement. The disturbance of soil from such a proceeding would be trifling, and the substitution of tottering gravestones and nameless garbage by flowers and level pavements would be a point gained in health as well as in beauty.

CHOLERA MICRO-ORGANISMS.

THE more one considers the subject matter of Dr. Koch's researches the more one is convinced that amongst the numerous workers who have been engaged in the search after specific organisms in cholera there must be several who have seen the same objects he describes, without, however, having attached to them the same significance. In lately referring to this matter we gave a hasty glance at some of these previous efforts, based upon the review afforded by Hirsch in his well-known work. One name was omitted wholly unintentionally, and perhaps rather strangely, seeing that a few weeks before we had published a letter from Dr. A. H. Hassall upon the special point. In justice to him we are pleased to revert to his researches made more than thirty years ago, and to be found in his report to the Government of 1853. We should be sorry indeed to think that the labours of one who amongst us has been a pioneer in microscopical analysis had been overlooked, and therefore we mention Dr. Hassall's name here in order that full justice may be rendered him. We are reminded that amongst the forms he detected and described were some spiral-shaped threads much resembling those which Dr. Koch believes to be a further stage in development of the comma bacilli. It is, we confess, highly probable that what Dr. Koch saw in 1883 Dr. Hassall perceived in 1853. It is one penalty we have to pay for the high-pressure life of the present day that new discoveries are made because the old ones are forgotten, and the labours involved in the latter are lost sight of in the present glories

of the former. Of course the lines of investigation pursued by Koch are, as compared with his predecessors, quite novel and searching; for he does not content himself with mere detection and description, but studies his micro-organisms from the point of view of the biologist, and records their behaviour under every conceivable test. It is work in this physiological direction which is doing so much to elucidate the nature of disease, and until the same spirit is applied to the whole domain of pathology the latter will be incomplete. We know no more about a disease by ascertaining its morbid anatomy only than we know about a bacterium by mere familiarity with its morphology. Useful up to a certain point, such knowledge is of value to us in the separation of diseases, but tells us little of their essential nature. And, as far as cholera is concerned, although many have believed that they found the living entity peculiar to it, not one of Koch's forerunners has carried the question so far as he has done, and studied this "germ" in all its life-relations. So thoroughly has this been done by Koch that it will require demonstrations as searching and as thorough to prove that he has not been on the right track, but has been pursuing an *ignis fatuus*. Nothing to our mind is more striking than the remarkable reception which his researches have met with, not only among leading German pathologists and physicians, but even in France, where the bias was till lately quite the other way. All this enhances the interest with which we shall look forward to the approaching inquiry in India, although there, too, we doubt not, are to be found men like Dr. Vandyke Carter, who can weigh and appreciate the evidence adduced by Koch, and who are not blinded by prejudice or enchained by preconceived ideas.

ISOLATION ARRANGEMENTS AT BRISTOL.

THE renewed discussions which have taken place at Bristol as to the question of isolation for infectious diseases, and especially the manner in which the subject was dealt with by the urban sanitary authority, show clearly that Bristol fails to understand the important position which adequate means of isolation hold in the sanitary defences of the community. Some of the opinions which were expressed by the medical officer of health are also, in our opinion, but little calculated to set this question on a proper footing. Thus, Dr. Davies is reported as having expressed the opinion that large hospitals containing typhus and other fevers were, from a sanitary point of view, a great evil. Now, it is difficult to understand how such an infectious hospital as Bristol needs can, under ordinarily efficient control, become a danger; and, apart from the question of small-pox, all experience of such hospitals in England is entirely opposed to this view. The details given in Dr. Thorne Thorne's official report to the Local Government Board as to the influence of the London Fever Hospital, where some thousands of cases of typhus, relapsing fever, typhoid fever, and scarlet fever were under treatment, are a striking answer to the contention maintained at Bristol. Then again, Dr. Davies would not receive a patient into the hospital belonging to the sanitary authority unless he had a guarantee that payment would be forthcoming; and, at the same time, he would refuse admission unless he could assure himself that his action would go towards diminishing centres of infection in the city. In other words, work, which is admittedly carried out for the benefit of the community, is to be paid for by the individual who, in the interests of others, submits to isolation; and this in a building which has been erected and is maintained out of the public rates. Such views will, we believe, before long be altogether of the past, and sanitary authorities will come to see that it is as much to the public advantage to remove centres of infection from their midst at the public cost as it is to use the public funds in order to get rid of accumulations of refuse from amongst the community generally. Indeed, many authorities already take this common-sense view of the question, and the result is that they succeed where Bristol fails. The mere bargaining as to expenses has over and over again defeated its object; for, whilst waiting to know where the few pounds were to come from which would defray the cost of the isolation of cases of fever, the disease has spread, and whole families have been thrown on the rates. In every sanitary hospital there should be one uniform sort of accommodation open to all free of cost, and where possible a small amount of superior accommodation should be maintained for those who seek some measure of privacy, and who are able and willing to pay for it. The low social status of a patient forms no criterion as to the extent to which he or she may endanger public health, and it is often far more important, in the interests of a community, to secure the instant isolation of respectable people from dairies, hotels, and houses of business than it is to remove the sick from a labourer's cottage.

PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.

A WRITER in *The Times* depicts in glowing colours the advantages of St. Thomas's Hospital as a place for paying patients. We cannot quite share the satisfaction. The wards of hospitals are, as a rule, meant for the poor, and, from this point of view, every case of the kind described by the correspondent of *The Times* means the exclusion of a poor person who cannot afford to pay. We are not denying the utility of hospitals in certain cases for persons who can pay, nor do we forget that there are circumstances attending St. Thomas's which do not obtain with other general hospitals. But we hold that where cases can be treated equally well at home, home is the best place for them. There is need of care, in the interest of the poor, that the great hospitals be not wrested from them. It may be very satisfactory to the writer of the letter to have had a "very expensive operation" performed, and subsequent attendance, at the rate of nine shillings a day, including operation, food, nursing, and medical attendance; but it would be necessary to know much more of his circumstances to be able to justify such a use of the hospital, or such an under-payment of medical services.

HEALTH AND HOLIDAY RESORTS COMPETITION.

THE competition for public favour among health and holiday resorts is keen, and in so far as it induces a laudable desire for favourable health reports, is not altogether without public advantage. Our attention has, however, been called to an endeavour to "influence" local mortality statistics in a way that cannot be approved, and which might easily lead to most mischievous results. A circular letter has recently been issued to all the medical practitioners of Southport, signed by the medical officer of health for the borough, and by the chairman of the Health Committee, also a medical practitioner, calling their attention to the "desirability of limiting as far as possible the certification as deaths from 'diarrhœa' to those cases which are strictly and undoubtedly zymotic in their nature." Bearing in mind that the causation of infantile diarrhœa is still the subject of an extended Local Government inquiry, and that much difference of opinion prevails as to its zymotic origin, it is easy to guess that if the Southport practitioners respond to the invitation of Dr. Vernon and Mr. Pilkington, the result will be a remarkable decline in the death-rate from infantile diarrhœa in that borough during the present season. The circular concludes with the following sentence: "Believing that you are as anxious for the credit and repute of the borough as ourselves, we have ven-

tured to place this matter before you." The intention would seem to be to steal a march upon other health resorts by preparing the way for a low death-rate from summer diarrhœa in Southport. We must, however, enter a strong protest against any such local attempt to influence or limit the discretion of medical practitioners in the certification of causes of death; and we think that, on further consideration, the sanitary authorities of Southport will admit that their zeal for the "credit and repute of the borough" outran their discretion in the issue of this circular.

DAIRY SCHOOLS.

MUCH good ought to be effected by the establishment of a system of dairy schools, which is now under the consideration of the Dairy Conference Association, and of which Lord Vernon's school at Sudbury is the type and pioneer. There are many ways in which educational method may aid the perfection of the milk industry. The manufacture of butter and cheese, for example, presents a field of enterprise capable of rewarding a wider and higher degree of cultivation than it has yet received. This is probably even more the case with the largely pastoral countries of Scotland, Ireland, and Wales than with England. If the introduction of system into dairy training should help to develop this branch of industry, something will have been done towards the settlement of the social and sanitary question, How to find for poor as well as rich butter at once pure, wholesome, and cheap. Another matter which may well form a subject of instruction is the clean and healthy housing of cattle, with the equally important consideration of the kind of food best suited for nourishment of the animals and for milk production. One hears perhaps too little of the employment of other animals besides cows for dairy purposes. In the interest of invalids and children, though not of these only, it is to be hoped that the promotors of this scheme may have time to turn their inquiries in this direction.

THE RECENT REVELATIONS AT ALNWICK.

THE conditions associated with a death from English cholera at Alnwick in Northumberland, as revealed at a coroner's inquest, certainly call for the term "scandalous" which has been locally applied to them. The actual conditions of filth under which the death occurred are not the most important feature in the revelation that was made, for they might either have been accidental or have escaped detection. But when the medical officer of health and the inspector of nuisances are, in their evidence, compelled to admit that the reports on the sanitary state of the town and of the disgusting conditions of housing which are brought before the local board are almost habitually ignored, and when this admission is supported by details which are simply revolting, the sanitary administration to which the town is subject is placed in a very discreditable position. Thus in Shiel's-yard a room was found in which there were two standing beds, two shake-downs, an old table, and a form. Inhabiting the room were five men, three unmarried women, and two children. On a straw mattress on the floor were lying a man and a woman, and two men on another mattress. Two men, one woman, and two children occupied one standing bed; the keeper of the lodging slept in the other. The room measured about 10 ft. by 16 ft. by 7 ft.; it was dirty and dark, with no ventilation, and in the centre was a pan containing human excrement. These conditions, it appears, had often been brought under the notice of the authority, and yet they still remained. Such is an example of the sanitary administration to which Alnwick is subject, and it is to be hoped that at the next election the ratepayers will remember that the real responsibility lies with themselves, for they choose their own representatives to govern them. The coroner, in summing up, declared that the inquest had exposed a scandalous state of affairs in the town. The case is well deserving of the attention of the Local Government Board.

THE INDIAN CHOLERA COMMISSION.

SOME surprise has been expressed in India that the Government have appointed Dr. D. D. Cunningham and Dr. J. J. Cuningham to the cholera commission. It is feared that the last named gentleman, who, in his capacity as Sanitary Commissioner, has written much on the subject, may be too much hampered in his research by his well-known views of the nature of the disease (he has strongly upheld the non-contagious theory) to be entrusted with this new inquiry. We hardly reciprocate these fears; feeling assured that the inquiry will be conducted upon a strictly scientific plan, and that the conclusions arrived at will be drawn up with a sense of responsibility which should neutralise any of the effects of personal preference for a particular hypothesis.

CRUELTY TO GOATS AND DONKEYS AT THE SEASIDE.

NO one who has taken the trouble to look carefully at the goats and donkeys employed in drawing children's carriages or bearing on their backs heavy burdens of troublesome and irritable humanity, at the seaside in the spring and summer seasons, will need to be reminded that these animals are the subjects and victims of much needless and wanton cruelty. We are glad to see that the case of the "goats" has attracted attention of late. We venture to hope it will not be long before the poor donkeys are pitied and protected.

GOOD NEWS FOR MAN AND BEAST.

THERE are few societies more benevolent in their design and operation than the Metropolitan Drinking Fountain and Cattle Trough Association. In such a droughty summer as this it is pleasant to bring its claims under the notice of our readers. To say nothing of work in progress or preparation, the twenty-fifth annual report is able to announce the erection of fifty-two new troughs for animals and fifty-one new fountains for human beings. Most of the structures of the Society are examined and cleaned by its servants three times a week.

CHOLERAIC MICROSCOPY.

THE late Professor Filippo Pacini has left records of a series of original microscopic observations on cholera, which are in course of publication by Vallardi of Milan, under the editorship of Dr. Aurelio Bianchi. It will be very interesting to compare with Professor Koch's, the observations of one so eminent in histology as the discoverer of the Pacinian bodies.

THE DEATH OF A MIDGET.

THE papers contain accounts of a poor diminutive baby that was let out by its mother in Birmingham for 30*s.* a week for a show. It was but six weeks old, nine inches long, and weighed only ten ounces. The child was exhibited every five minutes, with an interval for dinner and tea. When the mother was sober she suckled the child; when otherwise, as she usually was, it was fed on scalded biscuits. On Sunday convulsions came on, and in the course of a drive the day after, meant to revive the child so as to enable it to go on show to Nottingham, it was unkind enough to die. The wretched mother expressed her regret to the coroner that she had not sold the child, after death, for £20, as she might have done but for scruples about the law! She was severely

reprimanded by the deputy coroner, and not one whit too severely. But it strikes us as a great omission that no censure was passed on the showman, who was scarcely, if indeed at all, less culpable than the debased and unnatural mother.

IN the *Indian Medical Journal* of July, Dr. P. Cullen gives a table of thirty-eight cases of leprosy, setting forth age, sex, occupation, family history, &c., of the sufferers. Asiatics, as a rule, do not believe in communication of the disease by personal contact, but are highly suspicious of food which has been handled by a leper. In no case out of the thirty-eight were the living children of the lepers affected with leprosy, and in only four cases was admission made of the disease being present in the parents or grand-parents, thus far indicating the absence of heredity in the causation of the malady.

THE honour of knighthood has just been conferred upon Dr. William Carter Hoffmeister, Surgeon-Apothecary to the Queen at Osborne. Dr. Hoffmeister obtained the degree of M.D. at the University of Glasgow in 1840, the diploma of Fellow of the Royal College of Surgeons in 1855, his membership diploma bearing date 1840, and the licence of the Royal College of Physicians of London in 1861. He is Honorary Consulting Physician to the Royal Isle of Wight Infirmary, and Surgeon to the Royal Yacht Squadron.

FROM the report of the examination made by Colonel Sir Francis Bolton, C.E., of the water supplied by the several metropolitan water companies during the month of July, it appears that the Thames water was of about the same average quality as in the previous month, being again, for river water, remarkably free from organic matter. The water drawn from the Lea exhibited some improvement on the previous month's samples.

SURGEON T. K. ROGERS, Professor of Chemistry, Madras Medical College, and Chemical Examiner to the Government of Madras, died of typhoid fever on June 12th. He entered the service in 1877.

REPORT through Russian sources states that the "plague" at Bagdad is subsiding. Quarantine regulations are, however, still in force.

THE

BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

No. III.

BACTERIA ASSOCIATED WITH DISEASE IN MAN.

SPIRILLUM OF RELAPSING FEVER.

(*Spirochæte Obermeieri.*)

THESE are fine threads, having a spiral form. (Fig. 9.) In length they usually measure from 16 to 40 μ. When alive they progress rapidly, and an undulatory movement may be seen passing from one end of the thread to the other. They occur in the blood of patients affected with recurrent fever, during the onset of the attacks, but are not found in the intervals. They cannot be cultivated in the usual manner, but the threads retain their mobility for a long time in blood serum and in half per cent. salt solution. Blood containing the spirilla, inoculated into monkeys, causes them to become affected with relapsing fever, and the blood of an animal killed at the height of an attack is found to contain the organism in abundance.

BACILLUS OF MALIGNANT ŒDEMA.

(*Vibrion septique* of Pasteur.)

This is a rod-shaped bacillus (Fig. 10), which varies considerably in length, reaching 3·5 μ. The breadth is 1 to 1·1 μ.

FIG. 9. FIG. 10.

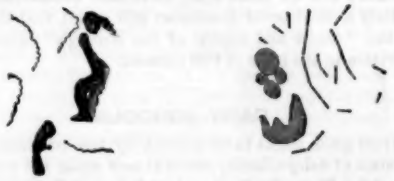


FIG. 9.—Spirilla from the blood in a case of relapsing fever. Objective $\frac{1}{12}$ in.

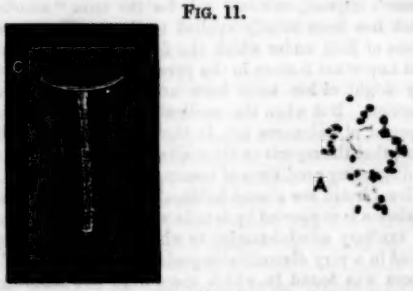
FIG. 10.—Bacilli of malignant œdema in the œdematous fluid. The nuclei of two pus corpuscles are represented. Objective $\frac{1}{12}$ in.

They often lie in chains of two or more bacilli, and are found also as long threads, in which no jointing is observable. They are distinguished from the anthrax bacillus by their smaller breadth and their less abruptly truncated ends; they are, moreover, frequently motile. This bacillus is widely distributed, and occurs, among other places, in the upper layers of cultivated ground. When such earth is placed beneath the skin of a guinea-pig it frequently happens that extensive subcutaneous œdema occurs, and the animal dies in the course of twenty-four to forty-eight hours. The bacilli are then found abundantly in the œdematous fluid and in the lymph of the different organs, though they do not appear in the blood of the heart for some time after death. The same phenomena appear when a considerable quantity of the œdematous fluid is injected beneath the skin of another animal. The bacillus is one of the "anærobien" whose growth is hindered by the presence of oxygen. It is cultivated with difficulty outside the body, and then only without free access of oxygen. Injection of the cultivations again gives rise to the symptoms of the disease.

BACTERIUM LACTIS.

This is an actively moving oval bacillus (Fig. 11), which exists in milk in great numbers. When isolated and cultivated in gelatinised meat infusion (Fig. 11, C) it forms a rather

FIG. 11.



A, Bacteria from a cultivation in gelatinised meat infusion. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

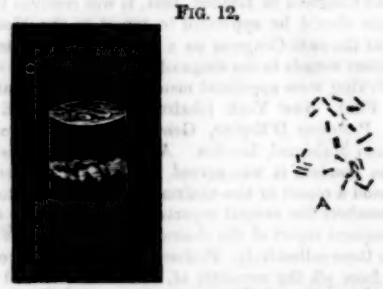
slender white growth along the track of the inoculating needle, but spreads on the surface of the gelatinised mass, forming a thin transparent expansion. When a small quantity of such a cultivation is inoculated into a flask of milk which has been plugged with cotton-wool and sterilised, the milk "turns sour," the milk sugar is converted into lactic acid, and curds and whey are formed in the usual manner. The milk so altered remains without undergoing any further change.

BACILLUS BUTYRICUS.

This bacillus (Fig. 12) is about 3 to 10 μ long and less than 1 μ broad. It often occurs in chains, and sometimes as long, apparently, unjointed threads which exhibit active move-

ment. In solutions of starch, dextrin, and sugar it sets up a fermentation with the production of butyric acid, carbonic oxide, and hydrogen. The process of spore formation takes place as follows:—The bacilli become shorter and increase in breadth up to 2·6 μ. In the shorter rods this widening takes place in the middle, in the longer at one end. At the same time the protoplasmic contents become more highly refractive, and the limiting membrane thickens. The spores are set free by dissolution of the membrane of the mother

FIG. 12.



A, Bacilli from a cultivation. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

cell. They are ovoid bodies, measuring 2–2·5 μ long and 1 μ broad. When they germinate, the double contour of the spore disappears at one end, and the contents grow out into a bacillus. The young bacilli may often be seen with the empty spore membrane attached to one end. The bacillus may be cultivated in gelatinised meat infusion (Fig. 12, C.), and causes it to become liquid. The bacilli fall to the bottom of the liquid part, but a white scum is formed at the surface.

MILK MICROCOCCUS.

This is a small micrococcus (Fig. 13), frequently found in milk. So far as has yet been discovered, it produces no fermentative change in it. It may be cultivated in gelatin-

FIG. 13.

FIG. 14.

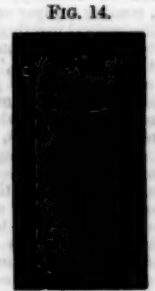


FIG. 13.—A micrococcus commonly found in milk. A, Micrococci from a cultivation. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

FIG. 14.—A, Bacilli from a cultivation. Objective $\frac{1}{12}$ in. C, Test-tube cultivation. The appearance beneath the surface expansion is to indicate the deep smoky-brown colour induced in the gelatinised infusion by the growth of the organism.

ised meat infusion (Fig. 13, C), and forms small round white balls along the track of the inoculating needle, but no surface expansion.

BACILLUS OF BLUE MILK.

Milk which is turning sour is sometimes observed to become blue, the extent to which it does so varying greatly at different times and different places. This change is due to a rod-shaped bacillus (Fig. 14, A). When cultivated in gelatinised meat infusion (Fig. 14, C), it forms a very slender growth along the course of the inoculating needle, and spreads on the surface after the manner of the bacterium lactis. The infusion on which it grows undergoes a remarkable change of colour, a change which extends far beyond the limits of the growth itself. The colour is a deep smoky-brown when seen with transmitted light.

THE INTERNATIONAL HEALTH EXHIBITION.

GERMANY AND AUSTRIA.

THE sister court to that occupied by the French section contains the exhibits of Austria, Germany, and Italy. These in many respects are attractive and interesting, but they suggest a general rather than a special exhibition. Lobmeyer's hand-painted glass from Austria; the art pipes and cigarette-holders, some of them carved by mere children, shown by Raunegger of Vienna; the German potteries of the Neuremberg type; Adarneck's soap, moulded and painted so as to resemble clusters of luscious fruit; the Italian filigree jewellery; the Florentine mosaics,—these and many other objects are deserving of admiration, but are not closely connected with the preservation of health. The Germans, however, show some inventions which have met with much approbation among continental hygienists: notably, Schomburg's spark and soot arresting apparatus, and Trentler and Schwarz's "Aërophor." The latter has received in England the greatest of all homage—imitation. This is an apparatus placed within an ornamental column which pumps air out of or into a room according to the manner in which the fan is made to rotate. The motive power is a small jet of water under slight pressure. A pulveriser is provided by which moisture or scented and medicated aromas may be mixed with the air. The smallest-sized apparatus will pump into a room 1800 cubic metres of air in an hour, at an expenditure of 0·35 metres of water. This is the invention which at the Berlin Health Exhibition took the only and highest award given for ventilation. Some English manufacturers have similar but not such complete methods, nor have they been so scientifically worked out.

Immediately opposite this ventilator are the ingenious contrivances devised by Dr. Ernest Sandow, of Hamburg, which he proposes to use both for the prevention of infection and for the treatment of infectious cases. For instance, there is a bed surrounded by curtains of a waterproof material to render them air-tight. At the foot of the bed is a box containing some felt and wool to filter the air, which can only gain admittance at this point; while at the other extremity a clockwork apparatus causes a revolving fan to draw out the air at the rate of forty to sixty feet per minute. If the case be infectious, the air drawn from the bed is conveyed by a flue underneath a stove, where it is burnt before being discharged into a chimney. Perambulators and carriages are similarly enclosed and ventilated, so that patients may enjoy the air of the street without having to breathe the dust, dirt, and floating matter which render town air especially dangerous, and which is arrested by filtering through felt. Dr. Sandow has also the happy idea of covering the stretchers or ambulances used for conveying patients to the fever hospital in such a manner as to allow no air to escape save that drawn by the clockwork ventilator through a filtering and disinfecting medium. Thus one of the principal objections to transporting fever patients to the hospital may be overcome. All these contrivances are susceptible of very wide application, and we should like to see some experiments made with respect to the ventilating powers of the clockwork machinery.

The improved adjustable scholars' desks, manufactured by the celebrated Berlin firm, H. Simon and Co., are to be found alongside Dr. Sandow's exhibits. This firm has taken a leading part in seeking to initiate reform in school furniture, which it designs after models calculated to prevent deformity among children. The desks shown are adjustable to the height of children of the age of six to sixteen years. The lower portion can be turned up so as to hold books and prevent stooping while reading, and the seat is so contrived as to keep the spine in its proper position. The fact that the Duke of Edinburgh has purchased some of these desks for his own family will, we hope, encourage the use of furniture constructed to harmonise with the laws of human anatomy.

Schomburg's spark and soot arresting apparatus is a somewhat complicated form of chimney-cowl, and cannot be easily described, but as it is widely used in Germany, is patronised by the Government, and adopted by the German navy, it should be carefully examined. The apparatus consists of a metallic box and chimney, to be placed on the roof of buildings or on the decks of ships. There is a circular brush and weight

attached, which when let down sweeps automatically the chimney. The smoke on ascending strikes a spiral division, which throws the soot into a box; while the smoke escapes into the air. The action of lowering the brush opens the soot-box, thus letting out at cleaning time what has been collected in it. The system has the extra advantage of preventing the escape of sparks from the chimneys, thus reducing the risks of fire.

Most of the other German exhibits relate to the creature comforts, not least among these being the Berlin automatic ash tray; this at once extinguishes and hides from sight the tips of cigars and cigarettes, which cause by far the larger share of the nuisance due to smoking. There are, of course, some German wines and beer; but those reformers who connect the cause of temperance with hygiene will be especially interested in the Weissbier, which, though brewed from wheat, malt, and hops, is a non-intoxicating beverage. It should be sold at a very cheap rate, and would then constitute a popular nutritive drink. Perhaps Hermann Stibbe's elaborate array of liqueurs is also as nearly connected with the cause of temperance. Alcoholic excesses must destroy the power of appreciating the varied and refined flavours of maraschino, crème de theine, and Dutch curacao; thus we always find these delicacies to be best appreciated among essentially temperate people. In England the consumption of liqueurs is very limited, a consequence probably of the exorbitant prices charged. In this case, however, the prices quoted are exceptionally moderate, a result attained by the establishment of a branch manufactory at Cologne, which enables this old Amsterdam firm to avoid the heavy Dutch duties on alcohol. We have tasted these liqueurs, which are now imported into the English market, and find that cheapness does not detract from their body and flavour. There are also some celebrated German mineral waters exhibited, notably the Juliushall, an effervescing water that is very similar to though cheaper than Apollinaris, and is highly recommended for its digestive qualities. These waters are sold in London.

Mingled with the exhibits of Germany are those of Austria—to be recommended, however, for their gastronomic and artistic excellence rather than for their direct connexion with sanitation. There are, for instance, the Austrian mineral waters from the alkaline and acidulous spring of Giesshübler; and the digestive and flavouring Paprika (capsicum annum), which, in various degrees of strength and pungency, may be considered as the Hungarian curry. Samples from the shiploads of prunes from Bosnia and Turkey that are sold in England as French prunes are also shown here by Markó and Weyden of Budapest. There may also be seen the curious honey-cakes popular in Central Europe, and a "nectar" liqueur which professes to work wonders. This is an alcohol flavoured with the extract of ten different herbs, including camomile, vermouth, ginger, black pepper, vanilla, &c. But the exhibits that will be most welcome to the traveller and connoisseur are the celebrated Hungarian wines of the Château Palugyay, near Presburg. These have now been introduced into the English market by Messrs. Josaphat and Co., and merit special notice, for by reason of their purity and moderate price they may well compete with the French wines. In these wines there is much choice and variety; there are the Château Palugyay hocks, Karlowitzer, and some exquisite Tokay. Among the less known wines we would recommend the Ofneradelsberger as a rough, strong, nutritious wine, apparently free from too much sugar, and containing probably a large proportion of iron and tannin. The Château Palugyay claret has a soft, round flavour that will suit the English palate; while, for medical purposes, the Tokay Szamorodny and the Adelsberger may be recommended. Most of these wines are cheap; and, from a sanitary point of view, all cheap pure wines should be welcome, as tending to fortify the system and to check intemperance by engendering refined tastes.

In conclusion, we should mention Hans Denk's patent cross-stitch print, which will save the eyesight of the thousands of children employed in Central Europe to ornament table-linen by coloured embroidery. The counting of stitches is avoided by this method, and much economy of time and visual power realised.

VACCINATION GRANT.—Mr. T. H. Tidswell, of Morecambe, has received the Government grant for successful vaccination (third time).

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

(From our own Correspondent.)

AMONGST the papers read on Monday, August 11th, that by Professor Austin Flint from New York, in the Section of Medicine, was one of the most interesting. At the meeting of the last Congress in London, 1881, it was resolved that a committee should be appointed to report to the Medicine Section of the next Congress on a uniform nomenclature of auscultatory sounds in the diagnosis of diseases of the chest. The following were appointed members of this committee: Austin Flint, New York (chairman); Professor Ewald, Berlin; Professor D'Espine, Geneva; and Drs. Douglas Powell and Mahomed, London. At a meeting of this committee in London, it was agreed that each of its members should send a report to the chairman, who engaged to send to the members the several reports or an abstract of them, the subsequent report of the chairman to the Congress to be based on these collectively. Professor Flint had now received reports from all the members of the committee and from them he had made the accompanying tabulated lists. Professor Flint concluded his paper by laying stress upon the great international importance of a uniform nomenclature. The work had been very difficult for the members of of the committee, and they would be glad to have suggestions from the medical profession. In the discussion that followed Professor Ewald, Dr. Mahomed, and Dr. Acland took part. Professor Ewald called attention to the great difficulty of the question, of which the lists ought to be considered only provisionary, but he hoped that an addition to the number of the committee would make its solution easier.

In the Section of Surgery it was expected that Sir Joseph Lister would read the first paper, but that gentleman was not present. Professors Esmarch, Trélat, and Verneuil read papers on the Operative Treatment in Malignant Diseases of the Rectum.

The Section of State Medicine was that most numerously attended on Monday, Professor Tommasi Crudeli, from Rome, reading a paper on Asiatic Cholera.

At the general meeting on Tuesday, Professor Crudeli read an interesting paper on Malaria. After apologising for using the word "malaria," instead of the more strictly scientific term, as the title of his paper, he proceeded to combat the theories which ascribed malaria to telluric causes. That idea was, he said, entirely false, as had been proved by various observers; nevertheless, the nature of the soil had much to do with the development of the disease. The term "malaria" had long been associated with the theory of a ferment independent of the soil. The nature of this ferment had not been definitely ascertained, and many theories had been formed with regard to it. Some observers were of opinion that it originated in a living contagion, which appeared only under special circumstances. Others sought it amongst different water-plants, and whole series of seaweeds have been described as the conductors of the disease. In his opinion, however, the enemy was a living ferment, the representative of a parasitic organism, the peculiarities of which he further described. Its development depended upon certain conditions—viz., (1) a temperature of more than 20° Celsius, (2) a soil favourable to the reception of the organisms, and (3) the influence of the atmospheric oxygen upon the soil. With regard to the effect of temperature, Crudeli laid stress upon the fact that the health of the inhabitants of malarious districts improved during the winter, but that a sudden rise of temperature was frequently accompanied by an outbreak of the disease. It was of course impossible to reduce the temperature by artificial means, but it was possible to improve the state of the soil. With this view drainage and canalisation had been proposed, by which means the subsoil was drained and the escape of the surface-water facilitated. Anchisi, in the last century, propounded the theory that malaria could be prevented by planting trees. He (Crudeli) had but little faith in this method, and in support of his opinion adduced the fact that eucalyptus trees had been planted in the Roman Campagna, and had given great hope, until, in 1882, malaria broke out in that part, whilst other malarious districts had remained free from disease. Nevertheless, these means should not be neglected.

The object should be to make the soil sterile for malaria without robbing it of its fertility; a thorough cultivation of the soil was to be highly recommended. The principle, however, which, in combating malaria, it was most important to keep in view, was that by promoting the general health the disease might be kept at bay. Many experiments had been made in this direction with quinine and eucalyptus preparations, but as yet none had proved satisfactory. Certain experiments which the speaker had made with arsenic had yielded good results, and these experiments were now being conducted on a larger scale. They had been commenced in the beginning of 1882, and had been continued last year and this year. As a rule for the treatment by arsenic, he pointed out that it must be commenced before the malarial season sets in, and the doses must be gradually increased. In Bosnia experiments had been made upon sixty-seven individuals, and had been attended with happy results. Of course, the use of arsenic required much caution, as it was not desirable that the population should become arsenic eaters. His experiments were, however, far from being concluded. Moreover, they met with considerable opposition, as patients often objected to taking sufficiently large doses of the drug. In conclusion, Crudeli pointed out the great advantage of high and airy sleeping places. He reminded his audience of the facts that the Greeks slept on the roofs of their houses, that in malarious districts the inhabitants often used the lofty monuments as sleeping apartments, and that the engineers of the Panama Canal slung their hammocks high up between two bamboo poles.

Dr. Verneuil of Paris then spoke on the Neoplastic Dia-

ENGLISH & AMERICAN LISTS.	GERMAN LIST.	FRENCH LIST.
	I. PALPATION.	
1. Vocal fremitus.	Stimmfremitus oder Vocalfremitus.	Vibrations thoraciques.
2. Rhonchal fremitus.	Rhoncofremitus oder Bronchialfremitus.	(Not included.)
3. Friction fremitus.	Pleuritisches resp. Pericarditisches Reiben.	Frottement.
	II. PERCUSSION.	
1. Tympanitic resonance.	Tympanitischer Schall.	Son tympanique: (*a*) grave; (*b*) élevé.
2. Amphoric resonance.	Metallklang.	Bruit de pot fêlé.
3. Diminished resonance; dulness.	Dämpfnung.	Submatité.
4. Absence of resonance; flatness.	Absolute oder starke; Dämpfnung.	Matité.
5. Increased resonance.[1]	Hypersonover Schall.	Son pulmonaire exagéré.
6. Bell sound	(Not included.)	(Not included.)
	III. AUSCULTATION.	
	A. First Group. Varieties of Breath Sounds.	
1. Exaggerated. Syn.: Puerile; compensatory; supplementary.	Verschärftes Athemgeräusch.	Respiration exagérée.
2. Diminished. Syn.: Feeble; weakened vesicular murmur.	Abgeschwächtes Athemgeräusch.	Respiration diminuée.
3. Suppressed. Syn.: Absence of breath sound.	Fehlendes Athemgeräusch.	Respiration supprimée.
4. Prolonged expiration, general or local.[2]	Verlängertes Expirium.	Expiration prolongée.
5. Interrupted inspiration. Syn.: Jerking, wavy, cog-wheeled.	Saccadirtes Athemgeräusch.	Respiration saccadée.
6. Tubular. Syn.: Bronchial; high-pitched blowing.	Bronchiales Athemgeräusch: (*a*) stark; (*b*) tief.	Souffle bronchique: (*a*) superficiel; (*b*) profond; (*c*) doux; (*d*) fort.
7. Vesiculo-tubular. Syn.: Broncho-vesicular; harsh, coarse, subtubular.[3]	Unbestimmtes Athemgeräusch.	Respiration rude; broncho-vesiculaire.
8. Amphoric.	Amphorisches Athemgeräusch.	Souffle cavitaire amphorique, avec écho musical ou métallique.
9. Cavernous.	(Not included.)	Souffle cavitaire simple, sans écho, musical.
	B. Second Group. Adventitious Sounds.	
1. Rhonchi. Dry musical sounds: (*a*) Sonorous; (*b*) sibilant.	Rhonci. Trockene Rasselgeräusche: (*a*) sonor odor schürrens; (*b*) sibilant; oder pfeiffend.	Rhoncus. Râles secs: (*a*) Ronflants; (*b*) sibilants.
2. Stridor.	Stridor. Stenosengeräusch.	Sifflement laryngé. Bruit de cornage: (*a*) Trachéal; (*b*) bronchique.
3. Râles. Syn.: Bubbling râles—(*a*) Medium; (*b*) large; high or low in pitch.[4]	Feüchte Rasselgeräusche: (*a*) grossblasige; (*b*) mittelgrossblasige; (*c*) kleinblasige.	Râles humides: (*a*) gros, (*b*) moyens, (*c*) fins; (*a*) avec timbre bronchique, (*b*) sans timbre ou simples.
4. Gurgling.	Höhlenrasseln.	Gargouillement.
5. Clicking.	(Not included.)	Craquements: (*a*) secs; (*b*) humides.
6. Crepitation. Syn.: Crepitant râles.	Knisternde Rasselgeräusche; Knisterrasseln.	Râles crépitants.
7. Metallic tinkling.	Metallische Rasselgeräusche; Metallklang.	Tintement métallique.
8. Splash.	Succussionsgeräusch.	Succussion hippocratique.
9. Friction: (*a*) dry; (*b*) moist.	Reibegeräusch.	Frottement.
	C. Third Group. Varieties of Voice Sounds.	
1. Increase of vocal resonance.	(Not included.)	Voix exagérée.
2. Diminution or absence of vocal resonance.	Abschwächung und Fehlen der Stimme.	Voix diminuée.
3. Bronchophony.	Bronchophonie.	Bronchophonie.
4. Pectoriloquy.	Pectoriloquie.	Pectoriloquie.
5. Ægophony.	Ægophonie.	Ægophonie.

[1] American: Increased or vesiculo-tympanitic resonance. [2] American: Prolonged expiration; high or low in pitch.
[3] American: Broncho-vesicular. Syn.: Vesiculo-tubular.
[4] Moist or bubbling râles—(*a*) large, (*b*) medium, (*c*) small; high or low in pitch.

thesis, after which Dr. Billings of Washington presented the Congress with the following invitation :—

"In behalf of the medical profession of the United States, we, the undersigned members of a committee appointed for that purpose by the American Medical Association, have the honour to offer to the International Medical Congress an invitation to hold its next meeting in the City of Washington in September, 1887.

"AUSTIN FLINT.	GEO. J. ENGELMANN.
JERVOIS A. SAYRE.	F. M. BROWNE.
CHRISTOPHER JOHNSTON.	JOHN S. BILLINGS."

The most interesting event in the sections on Tuesday, the 12th, was Dr. Sayre's demonstration of his plaster-of-Paris jacket, and the exhibition of three leprous patients by Dr. Hansen from Bergen in Norway.

Wednesday, August the 13th, was almost entirely devoted to pleasure, the reception committee having arranged an excursion to Elsinore for the members of the Congress and their ladies. At 10 A.M. five large steamers left Copenhagen with about two thousand persons on board, and reached Elsinore at midday. Here luncheon was prepared in the ancient fortress of Kronborg; after partaking of which the guests visited the various points of interest in the neighbourhood. At 4 P.M. three long trains left Elsinore for Copenhagen, but part of the company stopped on the way to visit the beautiful Castle of Fredricksborg. In the evening, before a large audience, Professor Esmarch read his paper on Samaritan Schools.

On Thursday, the 14th, Sir William Gull read a paper on the International Collective Investigation of Disease, a report of which has already been published in our columns. The speech was received with great enthusiasm. Sir Henry Acland, the president, proposed a vote of thanks to Sir William, and laid great stress upon the importance of the matter in hand. The whole meeting then rose to express their appreciation of the address, which was remarkable not only for its practical and theoretical importance, but for the elegance and ease of its style. Sir James Paget seconded the motion, which was supported by Professors Ewald, Bouchard, and Billings, and carried unanimously.

The following Committee was then elected :—Professors Trier and Lange for Denmark; Professor Bull (Christiania), for Norway and Sweden; Professor Rauchfuss (St. Petersburg), for Russia; Professors Schnitzler (Vienna) and Pribram (Prague), for Austria; Professor D'Espine (Geneva), for Switzerland; Professors Ewald and Bernhardt (Berlin), for Germany; Professors Bouchard (Paris) and Lepine (Lyons), for France; Professor Jacobi (New York) and Dr. Daries (Philadelphia), for the United States; Sir Wm. Gull, Professor Humphry, and Dr. Mahomed, for Great Britain; and Sir Joseph Fayrer, for India. The representatives of Greece, Italy, Spain, German Switzerland, Holland, Belgium, Cuba, and Japan are still to be elected. Dr. Isambard Owen (London) was appointed General Secretary.

Prof. Panum, the Danish president, then said, "The importance of the resolution passed at this meeting is so great that this International Congress has perhaps the distinguished honour to open a new epoch in medical history. We to-day send into the world the basis of the most important investigations, only to be obtained by the co-operation of all civilised nations. At the same time that I congratulate our Congress on the resolution of to-day, I will express the hope that this new committee, which will girt the world, may be productive of happy results, and continue a blessing to humanity and a benefit to science."

(To be concluded.)

THE FIFTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our own Correspondent.)

FAVOURED by the most exceptional and splendid weather, the Sanitary Congress met under favourable auspices, though the recent death of the Prince of Orange necessarily threw a certain chill on the proceedings. All who spoke in the name of Holland had to deplore this national loss. Nor was this all. Death and disease had been active in the ranks of the organisers of the Congress. Sir G. J. G. Klerck, formerly a member of the Dutch Government, who had promised to act as president, died last January, and two of the vice-presidents were afflicted with severe illness. There are not so many members as at Geneva two years ago, though I have counted 212, including undoubtedly the most eminent sanitary authorities of France and Holland, and many distinguished reformers from twenty-one different nationalities. Many governments, municipalities, and learned societies have sent their delegates. But, as usual, England is more feebly represented than any other nation. We have, it is true, Dr. Corfield with us, and he is a host in himself, but in spite of distance, there are a greater number of members present from the United States than from England. Yet as England is the most prominent among European nations in carrying out practically the laws of hygiene, it should not only be represented by a powerful delegation, but the Congress should have been held in London, and during the Health Exhibition.

The proceedings commenced on Thursday afternoon, the the 21st inst., the Congress being opened by its President, Dr. de Beaufort, Senator. His speech was simple and cordial: he apologised for the absence of illuminations, for the quiet character of the reception, on account of the national mourning. But he not only promised a sympathetic reception, he declared that the Dutch people would not fail to take an intelligent interest in the proceedings of the Congress. (The Dutch newspapers have given full accounts of the debates.) Dr. de Beaufort was very sanguine as to the adoption by legislature of the discoveries of science, and thought that those pessimists who described this as an age of decadence were altogether in the wrong. When we saw doctors devoting themselves, heart and soul, to the development of those sanitary measures which were best calculated to reduce the number of their patients, we could not doubt the disinterested nature of their sentiments. Then there were those heroic scientific expeditions to the borders of the Ganges, and other places where epidemics were raging, that will not fail to elicit the admiration of future generations. In spite, however, of all these efforts, the cholera had invaded France; but union and mutual consultation would strengthen action, and the Congress might be described as a council of war held to combat the cholera. The members would meet in the ancient hall where the Dutch Senate held its sittings. On the roof, painted in the sixteenth century, when the Dutch Republic was in the zenith of its prosperity, we might see the civilised world gathered together to render homage to the greatness of Holland. This painting might serve as an emblem for the Congress, which had brought together representatives from all parts of the world to render homage to the great cause of humanity, the preservation of public health.

The general secretary, Dr. Van Overbeek de Meijer, who has had all the hard work and drudgery incident to the organisation of the Congress, then spoke and showed the difficulties that had to be overcome. The outbreak of cholera rendered the holding of the Congress a questionable matter; but with the approval of the French sanitary societies it was ultimately decided that a great international movement could not be checked by an epidemic in a mere corner of Europe. He denounced internal quarantines as vexatious and useless. After rendering homage to the doctors who bravely fought the epidemic and sought to check its development, he quoted the motto of the Prince of Orange, "*Je maintiendrai*," and of Holland, "Union is Strength." The Congress would also seek its strength in union, and against ignorance would maintain and propagate the knowledge and teachings of hygiene.

Dr. Corradi, of Pavia, recalled how Holland and Italy had been in the vanguard of civilisation, especially in respect to the medical sciences; and Dr. Caro, in the name of the Spanish Government, also returned thanks.

The real business of the Congress began on the morrow, when all the five sections met. It would, however, be impossible to describe even briefly the proceedings of all these groups. Each section meets five times, and for two hours, so that this represents twenty hours of close debate, not to mention the lectures delivered each afternoon. In the evening of the first day a brilliant reception was given to the members of the Congress by the municipality of Amsterdam at the Palace of the Arts and Sciences. The Burgomaster delivered a speech of welcome, and one of the best military bands discoursed sweet music. On the Friday there was an open air concert in the Zoological Gardens of the town and a soirée at one of the hotels, while on Saturday another concert was held at the pavilion of the literary club, in the celebrated wood which is one of the attractions of the Hague.

But the Sunday's excursion to Rotterdam, Feyenoord, Dordrecht, and Moerdijk was undoubtedly the most pleasurable event. The greater part of the day was spent on a steamer in contemplation of the dykes, the towns, and the marvellous industry of the Dutch people. The remaining three nights of the Congress are to be devoted to receptions and manifestations of hospitable welcome. In spite of all this much serious work has been done, and a fierce battle is now being waged on the question of quarantines. As a final result has not yet been attained, it will be necessary to postpone the analysis of the proceedings, for they will not be without influence on the various continental Governments who have sent special delegates to the Hague.

The Hague, August 25th, 1884.

CHOLERA AND QUARANTINE.

So far as Marseilles and Toulon are concerned, the reduced cholera mortality remains much at a standstill, the deaths at Marseilles varying from some six to ten, and those at Toulon from some two to four a day. A few fresh localities continue to receive infection in the south of France, but in no place does the disease make headway, and it is to be hoped that, although the subsidence of the epidemic is but slow, yet that it will soon be complete. Unfortunately, however, the extension to Italy has assumed serious proportions. At the commencement of August several of the northern provinces became infected, those of Cuneo, Bergamo, Turin, and Massa Carrara exhibiting as the month went on the largest number of attacks. Campo Basso, further south, was next attacked. Suddenly the disease took a further leap; it was asserted that suspicious cases had occurred at Naples, and then genuine attacks were reported from the neighbouring province of Cosenza. But it is in the north that the extension has been most severe, and during the past few days the epidemic has assumed very serious proportions both at Busca and Spezzia, in which places fifty-eight and eighty-four deaths respectively had occurred up to August 25th. But it is doubtful whether even this represents the real magnitude of the outbreak, for it seems clear that secrecy was maintained by the officials until it was no longer possible. The Italian Government are still seeking to control the diffusion of the infection by means of sanitary cordons and fumigations, and some thousands of troops are now engaged in an endeavour to effect the desired object. But even in Italy a strong feeling is beginning to show itself against the quarantine regulations as at present carried out. So long as they mainly affected foreigners all went fairly well, but now that the Italians themselves are suffering both from the actual nature of the restrictions and also in their commercial relations, a feeling of opposition is manifesting itself. Milan, it is said, is taking the lead in an agitation against measures which, whilst interfering with freedom of movement both of persons and of goods, have been ineffectual in so far as their professed purpose is concerned; and it is also believed that some members of the Ministry are beginning to doubt the value of the existing practice.

So far no case of cholera has been imported into this country, and every week that the season advances tends to make us more secure. Cholera in Italy is also less dangerous to us than the prevalence of the disease in France. The week has, however, not been entirely free from rumours of mischief at home, and the account which Mr. Holder of Hull published in *The Times* as to the passage across the country, from Cardiff to Hull, of a sailor who, after arriving at Marseilles, was still suffering from somewhat copious diarrhœa, can hardly be passed over in silence. It is true that, as yet, the truth of the statement that he successfully evaded the system of medical inspection at Cardiff rests solely on the word of a man who apparently had only recently got over a fit of drunkenness; and the sanitary officials at Cardiff have the reputation of being thoroughly efficient. But there is always the possibility that the most vigilant may be deceived by fraudulent statements, and the story as told hitherto rather savours of some such device. We hope to learn the true circumstances of the case.

The *London Gazette* of August 22nd and 26th contains notifications to the following effect:—

All vessels from the Italian peninsula arriving at Greek ports will be subjected to eleven days' quarantine. On arrivals from the French coast of the Atlantic five days' quarantine will be imposed.

The Danish Government has ordered that the provisions of sec. ii. chap. i. of the law of July 2nd, 1880, be enforced against ships coming from any ports of the mainland of Italy on the Gulf of Genoa or the Sea of Tuscany.

At Malta, arrivals from Sicily and Sardinia are admitted to free pratique.

All vessels proceeding to Monte Video from Toulon, Marseilles, or other places where cholera is known to exist, have to undergo eight days' quarantine on arrival.

At Gibraltar, a quarantine of seven days is imposed on arrivals from Italy, and all vessels arriving from ports east of Suez are admitted to free pratique, provided they are furnished with clean bills of health and that the health of all on board is satisfactory.

The Norwegian Government have declared all the ports in Great Britain and Ireland, Belgium, and Holland, as well as the German ports in the North Sea, infected with cholera, no quarantine, however, being imposed upon vessels arriving from an infected port unless cases of cholera have actually occurred on the passage.

The Portuguese Government have issued a notice intimating that the port of Cette is declared infected with cholera morbus since the 1st inst.

The Governor of the West African Settlements reports that all vessels arriving from any infected place (Toulon and Marseilles, and all places in free communication with those ports) will be subjected to seventeen days' quarantine, to count from the date of leaving an infected port, or from the date of the recovery of the last case of sickness on board.

WILLS OF MEDICAL MEN.

THE Scotch Confirmation under seal of office of the Commissariot of the county of Edinburgh, of the trust disposition and settlement of Alexander Wood, M.D., late of 12, Strathearn-place, Edinburgh, who died on Feb. 26th last, granted to John James Graham Brown, M.D., the Rev. James Wood Brown, and Mr. Daniel Molloy Massey, the executors nominate, has now been sealed in London, the value of the personal estate in England and Scotland amounting to over £26,000.

The will of Henry Allen Aldred, M.D., late of 4, Westbourne-park, who died on May 21st last in Hyde-park, was proved on the 13th ult. by Mrs. Jane Fraser, the sister, the value of the personal estate exceeding £17,000. The testator leaves all his real and personal estate upon trust for his said sister for life, and then for her children as she shall appoint.

The will of Joseph John Alphonsus Brown, M.D., late of Grantham House, Grantham, Lincolnshire, who died on June 13th last, was proved on the 11th inst. by Mr. Richard Dunkling Beasley and Mr. George William Shipman, the value of the personal estate amounting to over £15,000. The testator, after giving all his medical books to his eldest son, Joseph L'Oste Brown, leaves the residue of his estate between all his children and Anne L'Oste Norris, the child of his deceased daughter, Josephine Anne Norris.

The will of George Harriss Strange, late of Wardrew House, Lyonsdown-road, New Barnet, Herts, and of 92, Hatton-garden, surgeon, who died on June 2nd last, was proved on the 4th ult. by Mrs. Emily Strange, the widow, Mr. Robert Fisher Young, and Mr. Samuel Durham Kember, the executors, the value of the personal estate exceeding £1200. The testator bequeaths £100 and all his household furniture and effects to his wife and complimentary legacies to his other executors. The residue of his real and personal

estate is to be held upon trust for his wife for life, and on her death or marriage again for his son George William Davies Strange.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. Hanson Freeman, of Bilton Court, near Knaresborough, Yorkshire, £1000 each to the Halifax Infirmary and the Harrogate Bath Hospital.—Mrs. Jane Brown Grieve, of Orde House, Berwick-on-Tweed, £1000 to the Catholic Hospital of St. John and St. Joseph, Great Ormond-street, in affectionate remembrance of the late James Grieve.—Mrs. Mary Armitage, of 1, Redcliffe-square, the Boltons, Brompton, £200 each to Charing-cross Hospital, the Hospital for Diseases of the Hip in Childhood, Queen's-square, Bloomsbury, and the Convalescent Institution, Chatham, near Redcar, Yorkshire.—Mr. Joseph Nutter, of Park-terrace, Halifax, £1000 each to the Halifax Infirmary and the General Infirmary, Bradford; £500 to the Bradford Fever Hospital; and £100 each to the Blind Asylum and the Eye and Ear Infirmary, Bradford, and Ilkley Bath Hospital.—Mr. James Lyne Hancock, of Blenheim Lodge, Putney-heath, and of 266, Goswell-road, vulcanised india-rubber manufacturer, £1000 each to King's College Hospital and St. George's Hospital; and £500 each to St. Bartholomew's Hospital, the Hospital for Diseases of the Chest, City-road, the Royal Hospital for Incurables, Putney, and the London Hospital, Whitechapel.—Mrs. Catherine Abram, of Belsize-terrace, Hampstead, £1000 to the North London Consumption Hospital.—Miss Martha Butler, of 25, Marlborough-buildings, Bath, £200 to the Bath United Hospital.

EXAMINATION OF CANDIDATES FOR THE ARMY, INDIAN, AND NAVAL MEDICAL SERVICES.

THE following were the questions set at the recent competitive examination for Her Majesty's British Medical Service:—

Anatomy and Physiology (Monday, August 11th, 1884, from 10 A.M. to 1 P.M.)—1. Describe the tibia, giving an account of the origin and insertion of the muscles arising from or inserted into it. Describe also the structure of the knee-joint. 2. Describe the abdominal aorta, giving an account of its relation to neighbouring parts. Enumerate its branches and describe in detail the relation and distribution of those of the cœliac axis. What are the sources of animal heat, and the nature of the mechanism by which it is regulated and distributed? Explain how it is that a mean temperature of the body is preserved under exposure to the influence of either extreme heat or extreme cold. 4. Describe the origin, distribution, anatomical relations, and functions of the spinal accessory nerve and its branches. 5. Describe the dissection by which you would expose the parotid gland. Give an account of its connexion and relation to the various neighbouring structures.

Surgery (Monday, August 11th, 1884, from 2 P.M. to 5 P.M.)—1. What are the causes which give rise to extravasation of urine in the perineal region? Describe the appearance of the parts in the various stages of extravasation, and the treatment, and the consequences of such an injury. Describe the symptoms by which chronic inflammatory swelling of the testicle may be diagnosed from any other enlargement of that organ, and the treatment to be adapted for the relief of the first-mentioned condition. 3. Explain generally what is understood by the term "tertiary syphilis." What tissues does it most frequently affect, and what should be the treatment under its various conditions? 4. What are the constitutional and local causes and general characteristics of gangrene affecting any portion of the lower limb in old age, independent of any severe accident; and what should be the treatment, according to the various stages or conditions of the malady? 5. Describe the conditions known as "caries" of bone. What bones are most commonly thus affected, and what serious complications may follow when it attacks certain bones? What are the best local and constitutional measures to be recommended under these various circumstances? 6. Describe the appearance and conditions of a knee-joint when the seat of acute synovitis, the treatment of such a case, and any unfavourable symptoms that may ensue when the acute state has subsided.

Medicine (Tuesday, August 12th, 1884, from 10 A.M. to 1 P.M.)—1. Explain the meaning of vaccination. Describe its purpose as first applied to the human race; and mention how, when, and by whom it came to be so employed. Explain what is meant by primary vaccination, and what by secondary vaccination or revaccination; and describe the regular phenomena which follow each of these operations; also describe the appearance of a perfect vaccine pustule, and of the scar which is typical of a genuine vaccination, and how its characteristic appearance is brought about. Explain, further, the *rationale* of "arm to arm" vaccination, and mention the age at which primary vaccination is to be done, and the means necessary to secure its success. Lastly, explain how "sufficiency in amount" of vaccination is to be judged of, and how the operation is performed. 2. What are the indications afforded by the ophthalmoscope in diseases of the brain, of its membranes, and of the cranial bones? 3. What are the diseases which may be mistaken for enteric fever, in the absence of the rose rash? and discuss the points in each case by which your diagnosis would be arrived at. 4. Describe the causation, morbid anatomy, histology, and treatment of rickets. 5. Describe the causation, phenomena, and morbid anatomy of the various forms of febrile disease usually described as puerperal fever. What are the indications for their treatment, prophylactic and curative; and on what grounds would you base a prognosis? 6. Name the officinal preparations of ergot, and the doses of each. What are the chemical principles obtained from ergot? and in which of them resides the activity of the drug? Describe the physiological action, the remedial uses, and the mode of administration of the crude drug, and of those of its constituents which have been used.

Zoology, Botany, and Physics (Tuesday, August 12th, 1884, from 2 P.M. till 5 P.M.)—1. What are the classes of the vertebrata? Arrange these classes into two groups in accordance with the presence or absence of an amnion during development. 2. Describe the stomach of a sheep, and enumerate the more important points of structure which are usually associated with this form of stomach in such animals as possess it. 3. In what order of birds are the wings so imperfectly developed as to be incapable of subserving the purpose of flight. Point out the leading features in the geographical distribution of this order. 4. Select any typical example you please of the Cœlenterata, and describe its structure. 5. Enumerate the principal points of difference as regards mouth-organs and wings between the following order of insects—Coleoptera, Hymenopters, Lepidoptera. Give an example of each of these orders. 6. What are the essential, and what the non-essential parts of a flower? Adduce one or more instances of flowers in which the non-essential parts are absent. 7. What is the difference between the fibre of cotton and that of flax? From what part of the plants yielding them is each obtained? 8. Define the natural order Ranunculaceæ? Adduce from the Pharmacopœia one or more examples of plants referable to this order. 9. What is cyclosis? Give some examples of this phenomenon. 10. What is chlorophyll? Mention the conditions necessary for its development. 11. What is meant by the "law of sines" as applicable to the refraction of light? 12. What is meant by the "dark lines" on the solar spectrum? How may these lines be accounted for? 13. State the evidence from which it has been inferred that various parts of the earth's surface are slowly undergoing changes of level. What is a "river delta"? Mention some of the principal river deltas of the world. 15. Explain the formation of "dew."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the General Sanitary Circumstances of the Orsett Rural District, by Mr. J. SPEAR.—This district lies on the north bank of the Thames, and it exhibits conditions which are indicative of grave defects in its sanitary administration. In October, 1880, Mr. Spear visited the village of Aveley, in consequence of a severe outbreak of enteric fever, and on this, his renewed inspection in 1884, he reports that he could find no diminution in the number and extent of sewage nuisances. Indeed, at the very house where the fever is supposed to have broken out he found the same foul privy and cesspool that existed in 1880, the moisture from the soak-hole apparently rising up the back wall, and being associated with a sickening smell in the rooms. Two children have died in the occupier's family since the first visit—one of diarrhœa, the other of so-called "inflammation," and two other members of the family are ailing. In the face of facts like these, it is not surprising to read that, though building bye-laws have been adopted for the district, they are in many important particulars not enforced, that ditches receive excremental filth, and that as regards many of the villages it is not even intended to supply the needed means of drainage. Ashpits, though made far larger in size than the maximum capacity permitted by the bye-laws, are frequently found overflowing, and the sanitary authority neither carry out the duty of scavenging themselves, nor do they impose it by bye-law on the occupiers. Much trouble has also been experienced in the district owing to the need of means for isolating infectious diseases; and the report gives a further proof of the special dangers connected with the establishment of small-pox hospitals in the vicinity of dwelling-houses. The only building available is the fever ward of the workhouse, and some years] back, shortly after the guardians were advised that owing to its proximity to neighbouring buildings it was, in the opinion of the Government inspector, unsuitable for the purposes of isolation, a few cases of small-pox were sent into it, the result being that the disease spread to the body of the workhouse, occasioning some mortality; and it was generally believed that a notable epidemic in the village of Orsett originated in the same way. Since then the building has been but little used. Mr. Spear strongly urges that the more populous villages should be sewered without delay, that closets not likely to cause nuisance should be provided, that proper arrangements as to scavenging and the repression of nuisances should be

organised, that the building bye-laws should be strictly observed, that polluted wells should be closed, and that adequate means of isolation should be provided. There can be no question but that the work here indicated is necessary. We can only regret that, in view of the past history of the place, as shown by the want of action at Aveley, we cannot look very hopefully into the future sanitary history of the district.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hexham (Rural).—Dr. Maclagan's annual report for 1883 is prepared with much care, although the matters it contains are this year mainly of interest to the locality itself. An account is given of the long-continued attempts to provide Prudhoe with a proper water-supply, the almost endless correspondence between the authority, the Local Government Board, and the Newcastle and Gateshead Water Company having so far led to little more than delay. A detailed account is given of the sanitary circumstances with which the several cases of infectious disease have been associated, and the occasion of their occurring is utilised for the purposes of getting sanitary work carried out. In a population of 34,086, the death-rate was 15·9 per 1000. A considerable increase took place in the deaths from the several so-called zymotic diseases; but the infantile mortality, a matter to which much attention had been devoted, underwent diminution, and fortunately the number of deaths uncertified by any medical practitioner has also been reduced.

Holme Valley (Urban).—The population of this district being estimated at 21,341, the birth-rate was 32·1 and the death-rate 19·0 per 1000. At Honley an outbreak of enteric fever took place, the number of attacks being 23 and the deaths 6. The cause was obscure; but it was probably due to defective drainage, and it is satisfactory to learn that in consequence a complete system of public drainage is now being carried out, and that Dr. Scougal has pressed upon the sanitary authority the importance of compelling all householders to connect their houses with the system. Although it is evident from the description of sanitary work which is given that disconnexion and like improved structural alterations are carried out in the district, yet it does not appear whether or no bye-laws are in force for Honley which will ensure that the new house-drain connexions shall be made after the manner illustrated in the Annotated Model Bye-laws. If not, the needed code of bye-laws should at once be adopted, otherwise it will be difficult to secure such works of house drainage as shall be free from danger to health.

Peterborough (Urban).—The death-rate for this city was 20·1 per 1000 in 1883. It is painful to read, year after year, of illness associated with the use of contaminated wells in an ancient town like Peterborough. Indeed, it is impossible to understand how the soil on which Peterborough stands can be regarded by anyone as affording a source of water-supply which can possibly be free from the risk of contamination. Dr. Paley has, however, again to refer to the subject, and he shows clearly how unwise it is to trust to the mere chemical ingredients of a single sample of water when the question of its possible pollution is under consideration. Thus, owing to typhoid fever and diarrhœa in one locality, privies had been replaced by proper closets, and the water, though suspected, was let alone because it was never found to contain organic matter in more than a very small quantity. Unfortunately, a very infinitesimal quantity of one sort of organic matter may be more potent for mischief than a very large quantity of some other organic contamination. On the recurrence of illness in the same locality fresh investigation led to the discovery that the well was polluted owing to a blocked drain. Here, as elsewhere, a careful examination of the surroundings of a well gave a more valuable indication as to its possible pollution than mere chemical examination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 23rd inst., 5864 births and 4293 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the two preceding weeks had been 21·9 and 24·1 per 1000, further rose last week to 25·6. During the first eight weeks of the current quarter the death rate in these towns averaged 23·2 per 1000, against 20·4 and 20·1 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 17·4 in Bristol, 17·9 in Derby, and 20·5 in London. The rates in the other towns ranged upwards to 35·9 in Bolton, 36·9 in Cardiff, 37·3 in Leicester, and 39·3 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which in the two preceding weeks had been 911 and 1108, further rose last week to 1314; these included 995 from diarrhœa, 77 from whooping-cough, 71 from measles, 67 from scarlet fever, 53 from "fever" (principally enteric), 27 from small-pox, and 24 from diphtheria. These diseases caused the lowest death-rates in Plymouth and Bristol, and the highest in Sheffield, Preston, and Norwich. The highest death-rates from diarrhœa were recorded in Hull, Preston, and Norwich; from measles in Bolton and Halifax; from scarlet fever in Sheffield and Cardiff; from whooping-cough in Huddersfield and Halifax; and from "fever" in Cardiff and Bolton. The 24 deaths from diphtheria in the twenty-eight towns included 17 in London. Small-pox caused 21 deaths in London (exclusive of 2 metropolitan cases registered outside Registration London), 3 in Sunderland, 1 in Liverpool, 1 in Sheffield, and 1 in Birkenhead. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had declined in the six preceding weeks from 1368 to 640, further fell to 587 on Saturday last; the cases admitted were 53, against 110 and 64 in the two previous weeks. The Highgate Small-pox Hospital contained 28 patients on Saturday last, 5 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined from 198 to 162 in the three preceding weeks, further fell to 157, and were slightly below the average. The causes of 108, or 2·5 per cent., of the 4293 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Leicester, Nottingham, and in four smaller towns. The largest proportions of uncertified deaths were recorded in Sunderland, Oldham, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·7 per 1000 in each of the two preceding weeks, rose to 21·8 in the week ending the 23rd inst.; it was 3·8 per 1000 below the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 13·4 and 14·5 in Perth and Edinburgh, to 26·5 in Glasgow and 29·4 in Paisley. The 524 deaths in the eight towns included 74 which were referred to diarrhœal diseases, 28 to whooping-cough, 14 to scarlet fever, 13 to diphtheria, 6 to measles, 6 to "fever," and not one to small-pox; in all, 141 deaths resulted from these principal zymotic diseases, against 114 and 109 in the two preceding weeks. These 141 deaths were equal to an annual rate of 5·8 per 1000, which was 2·0 below the average rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 51 in each of the two previous weeks, rose to 74, and considerably exceeded the number in the corresponding week of last year; 45 occurred in Glasgow, 8 in Dundee, and 6 in Paisley. The 28 deaths from whooping-cough were within 1 of the number in the preceding week, and included 13 in Glasgow and 5 in Aberdeen. The 14 fatal cases of scarlet fever were all returned in Glasgow. The 13 deaths from diphtheria showed a considerable increase upon recent weekly numbers; 5 occurred in Glasgow, 3 in Aberdeen, 2 in Dundee, and 2 in Paisley. The 6 fatal cases of "fever" corresponded with the number in the preceding week, and 5 of the 6 deaths from measles were recorded in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns, which had declined in the four preceding weeks from 89 to 64, further fell to 58, and were 9 below the number returned in the corresponding week of last year. The causes of 72, or nearly 14 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 22·4 and 24·2 per 1000 in the two preceding weeks, further rose to 30·3 in the week ending the 23rd inst. During the first

eight weeks of the current quarter the death-rate in the city averaged 23·1 per 1000, the rate during the same period being equal to 22·7 in London and 16·7 in Edinburgh. The 204 deaths in Dublin last week exceeded by 41 the number in the previous week, and included 45 which were referred to the principal zymotic diseases, against numbers increasing from 16 to 33 in the four preceding weeks; of these, 25 resulted from diarrhœal diseases, 13 from scarlet fever, 3 from whooping-cough, 3 from "fever," 1 from diphtheria, and not one from measles or small-pox. These 45 deaths were equal to an annual rate of 6·7 per 1000, the rate from the same diseases being 4·7 in London and 2·5 in Edinburgh. The 25 fatal cases of diarrhœa showed an increase of 3 upon the number in the previous week. The deaths from scarlet fever showed a considerable increase upon recent weekly numbers, and were higher than in any preceding week of the year. The fatal cases of "fever" showed a further decline from those returned in the two previous weeks. Five inquest cases and 3 deaths from violence were registered in the city during last week, and 51 deaths occurred in public institutions. The deaths both of infants and of elderly persons showed an increase upon recent weekly numbers. The causes of 30, or nearly 15 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

INDIAN MEDICAL SERVICE.

WE learn from the *Indian Medical Gazette* that junior medical officers of the Indian Medical Service having been made available, under certain conditions, for duty with British troops, are to receive, when marching with British troops from one station to another, charge allowances on a scale equivalent to what is at present sanctioned for the temporary charge of native troops—viz., for an entire regiment 100 rupees a month, for a wing of a regiment or detachment of numerical strength equal to a wing 75 rupees, for a battery of Royal Artillery 50 rupees.

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Hugh Mackay Macbeth to be Brigade-Surgeon, vice R. C. Lofthouse, M.D., granted retired pay; Surgeon-Major William West Quinton, M.B., is granted retired pay, with the honorary rank of Brigade-Surgeon.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon William H. Putsey, to the *Boscawen*, for service in sick quarters at Portland; Staff Surgeon William J. Rankin, M.D., to the *Boscawen;* Staff Surgeon Robert W. Biddulph, M.B., to the *Duncan*, additional; Surgeon Alfred H. Kelly, M.D., to the *Valiant;* Surgeon James A. Collot, to the Royal Marine Artillery Division at Portsmouth; and John Paulin to be Surgeon and Agent at Peel, Isle of Man; Surgeons William W. Jacobs, Alexander F. Harper, Herbert W. A. Burke, and Edward R. D. Fasken, to the *Royal Adelaide;* Surgeon Evan St. M. Nepean, to the *Pembroke;* Surgeon Arthur S. Nance, to the *Indus;* Surgeon Alexander G. Andrews, to the *Asia;* Surgeon James C. F. Whicher, to the *Impregnable;* Surgeons Edward W. von Tunzelmann, M.B., Edward B. Townsend, Alexander G. Wildey, Patrick B. Handyside, M.B., Harold R. Osborne, James M. Rogers, Charworth L. Nolan, M.B., Harold F. D. Stephens, Francis H. Julyan, Edward C. Ward, M.B., William R. Minching Young, George L. Baker, Herbert W. G. Doyne, Alexander B. Murdoch, M.B., Thomas Dunlop, M.B., Samuel Johnson, M.B., George A. Dreaper, and William H. O'Meara, to the *Duke of Wellington.*

ARTILLERY VOLUNTEERS. — 1st Lanarkshire: Surgeon Robert Watson, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement.—1st East Riding of Yorkshire: Surgeon Archd. Megget resigns his commission.

ENGINEER VOLUNTEERS. — 2nd Tower Hamlets (East London): The services of Acting Surgeon Reginald Archfield Fergusson, M.D., are dispensed with.

RIFLE VOLUNTEERS.—1st Cornwall (Duke of Cornwall's): Acting Surgeon James Blamey resigns his appointment.—20th Middlesex (Artists'): Walter Pearce, Gent., to be Acting Surgeon. — 3rd Monmouthshire: Acting Surgeon Octavius Edward Bulwer Marsh resigns his appointment.—5th Lanarkshire (Glasgow 2nd Northern): Ernest Kingscote, Gent., M.B., to be Acting Surgeon.

Correspondence.

"Audi alteram partem."

"REARING OF HAND-FED INFANTS."

To the Editor of THE LANCET.

SIR,—I fear, good as the substitute advised by Mr. Walker in your last issue may be for the artificial rearing of infants, he will find but few who would take the trouble, even if his, or rather Dr. Frankland's, method were commonly known of compounding the daily supply; it is too complicated for the purpose, and the knowledge how to make it can never be sufficiently promulgated among mothers and nurses to bring it into general use; and I must say here I think the advice of Dr. Owen is excellent, as his system is within the reach of the most indolent and the most ignorant.

In my letter in THE LANCET of Aug. 9th, I think I pointed out more likely reasons why artificial feeding is so disastrous to infant life, and I believe that if those who have the care of dry-nursed children could be induced to feed them for the first few months of existence on new cow's milk diluted with an equal, or rather more than an equal, part of water, and sweetened with sugar of milk instead of common sugar—which induces lactic fermentation, and therefore increases the tendency to infantile diarrhœa—we should not hear so much of the awful mortality of young infants. I have never found this turn curdy, or disagree where I have recommended it, because when any complaint has been made to me of the infant rejecting it, and before permanent mischief was done, I have advised the addition of a little lime-water, and a slight curtailment of the supply. We all know that cow's milk is acid in reaction and human milk is alkaline, and knowing this it is always advisable to tell the nurse or mother how to correct this state of affairs. Under any system of artificial feeding an infant takes in a much larger quantity of food than when it is suckled; but it is not digested, and herein lies the cause, combined with irregular feeding and dirty bottles, of the mischief. It must not be supposed for one moment that I advocate the cow as the proper mother of an infant. I think the present system of rearing dry-nursed children the curse of this generation, and posterity will have to pay a bitter price for the indolence—if nothing worse—of the mothers of the present day, who, obeying the dictates of fashion, delegate to the nurse the duty that nature assigned to themselves. "Can a woman forget her sucking babe?" asks the prophet. Alas, the answer is not far to seek, and the infant mortality of the present day supplies a melancholy answer. Fancy this advice of Chavasse, advice followed by thousands of mothers; here is pandering to laziness with a vengeance: "A good plan is for the nursemaid to have a half-pint bottle of new milk—which has been previously boiled—in the bed, so as to give a little of it instead of the breast. The warmth of the bed will keep the milk at the proper temperature, and supersede the use of lamps, candlesticks, and other troublesome conveniences." Of course it will, and also cause it to turn and decompose in a few hours. No; our duty as medical advisers is to teach mothers that dry nursing is only another name for either killing their offspring or being blessed, or rather cursed, with weakly, rickety, puling children, that develop as they grow older, if they live long enough, tubercular disease and the other ills that follow in the train of early malnutrition. Must we go to the ancients for lessons? Mahomed, in the Koran, commands mothers to suckle their children for *two* years. "Mothers," he says, "after they are divorced, shall give suck unto their children full two years to him who desireth the time of giving suck to be completed." (Koran, chap. ii.) Dion relates that the nurse of Caligula anointed her nipples with blood before she gave him suck, which accounted for his cruelty, as he did not inherit it from his father or mother. Giraldus was of opinion that men and beasts participate in the nature and conditions of the animal whose milk they were brought up on, and he cites the case of a pig that suckled a brach, and when she was grown "would miraculously hunt all manner of deer and that as well, or rather better, than any ordinary hound." Who was that Queen of France, I wonder, of whom it is said that so careful was she that her child

should be suckled by herself alone, that when in her absence a strange nurse had done so, she was never quiet till she had made the infant vomit it up? What an example to the present race of mothers. Cato, it is said, would make his servants' children suck upon his wife's breast because by that means they would love him and his the better. If there is anything in these opinions of the ancients, and the children imbibe with the mother's milk a greater love for the parent, it may be an inducement to many mothers, if it were known, to suckle their own offspring; and if feeding, as is done in the present day and has been done for the last twenty years to many of the rising generation, on cow's milk gives to the infant the attributes of its foster mother, we need not go very far to seek for the origin of the "masher," though we may deplore the fact that so many calves have been robbed of their due quantum of nourishment to aid in bringing him to his present state of perfection.

I am, Sir, yours truly,

NATHANIEL EDWARD DAVIES.

Sherborne, August 24th, 1884.

THE ANCOATS MURDER: CASE OF J. J. DONNELLY.

To the Editor of THE LANCET.

SIR,—I have read Dr. Hughes Bennett's letter in your issue of to-day with interest, yet also with surprise and regret. Dr. Bennett is to be admired for his warm sympathy with the unfortunate, but there is something else required: a true man is just as well as generous. As was so well said in your article of the 9th inst. on the above subject—"Science knows nothing of sentiment, and we cannot afford to strain points for the sake of humanity." How can we expect judges, juries, or the public to treat us with respect if we allow our feelings or prejudices to warp our judgment—if, instead of giving evidence or expressing opinions in strict accordance with facts, we act as partisans? Is there anything more humiliating than to see or to read of medical men in a court of justice ranging themselves on opposite sides? It is the duty of a medical witness to speak the truth, the whole truth, and nothing but the truth; he has nothing to do with the consequences—those must be left to the judge and jury.

Dr. Bennett intimates that if he had been called as a witness in Donnelly's case, "he could have strongly advocated his irresponsibility." We are further told that "no one acquainted with the mental condition of the prisoner, and reading the public reports of his trial, could have the slightest doubts of his irresponsibility in the crime he committed." Dr. Bennett is dominated by the notion that Donnelly, on the night when he committed the crime for which he was sentenced to be hung, was suffering from epileptic furor. But there is no evidence to support such a view—at least, I cannot find any in the published reports. The deputy coroner, who is a barrister, went very carefully into this matter; he elicited from the prisoner's father that he had not had a fit that night; neither had he the premonitions or accompaniments or consequents of a fit. The father, after more than twenty years' experience, would know well the symptoms indicating a seizure. Both father and brother described these, but, with the exception of turbulence, Donnelly showed no signs of an attack; the family knew too well the true cause of his misbehaviour. Donnelly, unfortunately, was addicted to drink.

A consideration of the whole of the facts will, I think, show that Donnelly, from the time he came home at half-past nine on Sunday night up to that of his capture, knew not only what he was doing, but the probable consequences of his acts. After the father took up the poker and threatened to strike the young man with it, the latter checked his turbulence; and when finding himself locked out, it burst forth again. Instead of venting his anger on his father, who he knew had shut him out, he rushed to his own room out of his father's way. When subsequently his father somewhat cruelly refused him water, he again repressed any manifestation of rage. After having committed the murderous assault on two defenceless women, he precipitately made his escape and tried to conceal himself. Now, an epileptic suffering from maniacal excitement is as devoid of craft as he is blind to danger. Opposition renders him furious and reckless; neither poker nor pistol has any terrors. It is true that Donnelly attacked his sister in a paroxysm of anger, but it is certain that if his father had been in the room armed with the poker he would again have restrained his rage. Had Donnelly's father had any reason to believe that his son was threatened with a fit, instead of thwarting him he would have tried to calm and soothe the young man; but the family knew well that what Donnelly was suffering from was the effect of drink.

In summing up, the deputy coroner told the jury that "there was no evidence that the man was out of his mind at the time he committed the act, and if he was the worse for drink, that was no excuse, but rather an aggravation." The jury which tried Donnelly at the Assizes, having all the facts before them, came to the conclusion that Donnelly was sane when he committed the murder, and therefore found him guilty. The law blunderingly fails to discriminate between a deliberate cold-blooded murder and one committed in a sudden outburst of anger; it barbarously decrees death in both cases. The jury which tried Donnelly marked their sense of the difference, and therefore recommended him to mercy; but, so far from having deserved censure, the jury deserve the utmost credit for having discharged an onerous and very painful duty in a thoroughly conscientious and intelligent manner.

I am, Sir, yours truly,

Manchester, Aug. 16th, 1884. R. MARTIN.

"OUR MONSTER COUNTY LUNATIC ASYLUMS."

To the Editor of THE LANCET.

SIR,—Your article on the above, in the issue of August 23rd, is well-timed, and cannot fail to draw attention to the subject. It is now pretty generally recognised that asylums containing more than 800 patients are difficult of management, if not unwieldy and less economical than smaller institutions. You, however, allude to cases in which "from 1500 to 2000 insane individuals, *supposed to be patients*, are under the care and control of one medical man." Surely you should have added "aided by one, two, or more assistant medical officers." Otherwise the statement is misleading. In these days of scientific advancement, and the development of the healing art, the word "asylum" ought to be almost an anachronism. Patients struck down with mental disease should without delay be placed under the most skilled treatment possible in "hospitals for the insane," institutions in which the main object is to combat the disease in its earliest stage, and to restore the individual to the community with *mens sana in corpore sano*. Such hospitals would require a highly qualified medical staff with clinical assistants and all the necessary means of treatment, and should not contain more than from 100 to 150 beds. Cases after a fixed time deemed incurable should be transferred to the "asylums," the "homes for incurables requiring no special medical treatment." The "hospital for the insane" would be costly at the outset, but in the end would prove the more economical, the more humane, and the more creditable to civilisation. Heretofore the lunacy laws have been framed on the score of humanity solely. Surely the day is not far distant when the advancement of psychological science and the increased facilities for cure will demand consideration at the hands of our legislators. At the present time the medical staff of the county asylums do their utmost for the treatment with view to cure of the patients under their charge, but, from the ever-increasing numbers of the insane, "an enormous mass of material annually passes under their eyes which is almost wholly unutilised." Moreover, the four shillings per week Government capitation grant for the insane poor has of late years flooded the pauper asylum with idiots, imbeciles, and aged dements, because their transfer rids the unions of troublesome cases which, with this pecuniary aid, can be maintained as cheaply, if not more economically, in the county asylums.

I am, Sir, your obedient servant,

ERNEST W. WHITE, M.B. Lond., &c.

Kent Lunatic Asylum, Chartham, August 23rd, 1884.

*** Our statement relative to the number of patients under one medical man is in no way invalidated by the presence of assistant medical officers. The treatment of every patient in an asylum devolves virtually upon the Superintendent, and upon him alone the responsibility in the matter rests.—ED. L.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

THE ROYAL VISIT.

THE Royal week and visit have come to an end, and from what I hear and see on all sides I think we may fairly say they began and ended well. The general arrangements were complete and satisfactory, while the order maintained by the vast concourse during the visit, occupying several days, was remarkable indeed. The police report states that there were fewer cases of intemperance and disorderly conduct than during an ordinary week. The Mayor has scored a great success, and he deserves the special thanks of his fellow citizens, as he has already received those of Royalty. Where all have worked so well, it is no harm to mention the special and useful services of the Ambulance Corps rendered on the day of the procession. Owing to the extreme heat prevailing and the pressure of the crowd, as many as eight or nine people dropped down exhausted at one of our street corners. They were immediately attended to and removed to the tents of the corps, and not allowed to depart until fully restored. As might be expected, during the following days a very large number of minor accidents were admitted into the infirmary, and were duly attended to, but there was a remarkable absence of anything serious.

NEWCASTLE INFIRMARY.

At the last quarterly meeting the House Committee was charged with the nomination of a special committee for the consideration of the pressing need for a larger infirmary, and of the ways and means by which either the present building can be enlarged or a new one erected. Our *Daily Chronicle* points out, in reference to the above resolution, that the site of the building, although a good one in 1750, is not a desirable one now; and that while during the last quarter of a century the augmentation of the city and surrounding district, as regards population, has been enormous, the increased accommodation provided since the opening of the new wing in 1854 has been very small; that the great changes which recent years have developed in our social system render it very desirable that the old plan of admission by subscribers' tickets should be abolished; and that the institution should be converted into a free hospital. The *Chronicle* also points out that, although the present building possesses two undeniable advantages—namely, its central position and its open frontage to the south,—its drawbacks are serious, and more than counterbalance these benefits. A line of railway, on which busy traffic is conducted day and night, runs along the whole length of the main front, and two sides of the building are surrounded by the cattle and sheep markets of the city. The noise and bustle arising from their contiguity are seriously detrimental to the purposes of the infirmary. It was further pointed out at the meeting that, although the house has accommodation for 200 beds, there has often been 230 in use; and that in times of pressure female patients have to be sent to the lock ward—a procedure, to say the least of it, very undesirable.

SANITARY DEFECTS AT ALNWICK.

A recent coroner's inquest on a case of English cholera at Alnwick has brought to light what is described as "a scandalous state of affairs" as regards sanitary matters in the ducal town. From the evidence of Mr. J. H. Davidson, it would appear that there is no registration of lodging-houses in the town, and that he has frequently drawn the attention of the Local Board to these defects, yet no action has been taken. Mr. Davidson has seen as many as twenty people crowded into two small rooms in a very filthy condition. The verdict of the jury was in accordance with the evidence—namely, "Death from English cholera." The coroner, in opening the inquiry, stated he considered it to be his duty as much to inquire into the death of a person from preventable causes as from accident.

Newcastle-on-Tyne, August 26th, 1884.

AMERICAN EXHIBITION.—An exhibition of the arts, manufactures, products and resources of the United States of America will be opened in London on May 1st, 1886.

IRELAND.

(From our own Correspondent.)

CASES OF ALLEGED CHOLERA IN KILMACTHOMAS WORKHOUSE.

A MAN named Kennedy, a native of Glasgow, who had stowed himself on board a Liverpool vessel, and was landed at Kinsale, was admitted on the 20th inst. to Kilmacthomas Workhouse. On the following morning he complained of being attacked with vomiting and purging, and a couple of hours afterwards was seen by Dr. Walsh, medical officer of the union. Dr. Martin of Portlaw also saw the patient, and he and Dr. Wynne considered it an undoubted case of Asiatic cholera. Kennedy became worse, and died at nine o'clock the same evening. Dr. Walsh is doubtful of the case, and he considers it an open question whether the disease was Asiatic or English cholera. The Local Government Board having been communicated with, sent down Dr. Brodie to inquire into the matter, but so far the result has not been made known. I may add that since Kennedy's death a female of weak mind, resident in the workhouse, presented choleraic symptoms and died on the following day. So far all sanitary precautions have been taken by Dr. Walsh; the patient's clothes have been burned, as well as the clothes worn by the male nurse and attendants, and the casual ward and room in the Fever Hospital have been disinfected and closed.

THE ROYAL UNIVERSITY.

Plans for altering the University buildings and for adding a new wing have been approved, and will be commenced immediately, at an estimated cost of £25,000. A chemical laboratory 120 ft. by 30 ft. will form a portion of the wing, and adjoining this will be smaller laboratories, and an apartment for the study of histology 58 ft. by 16 ft. The physical laboratory will be 90 ft. by 30 ft., and close to this will be the physiological museum, 57 ft. by 30 ft. Behind these apartments will be the dissecting room, 120 ft. by 30 ft., and in connexion with it a smoking room for students, lavatories, and retiring rooms. At the centre of the building there will be placed a tower, at an elevation of 90 ft., which will be utilised as a ventilating shaft, in connexion with which the different apartments will communicate. The works will probably occupy two years.

THE DUBLIN HOSPITALS.

From the twenty-sixth report of the Board of Superintendence of the Dublin Hospitals which receive grants from Parliament, it appears that there are nine of these institutions, two being lying-in, two ophthalmic, two fever, one lock, and three general hospitals. On the 1st April, 1883, there remained 815 patients in these hospitals, while the number admitted during the year was 9560, making a total under treatment of 10,375, of whom 9226 were discharged cured or relieved. The deaths amounted to 433, or a mortality of 4·69 per cent. on the cases treated to a termination. The average annual cost per bed for maintenance and for establishment charges ranged from £26 18*s.* 2*d.* in the Hospital for Incurables, to £72 4*s.* in Cork-street Fever Hospital, and £85 14*s.* 6*d.* in the Coombe Lying-in Hospital.

The post of lecturer in Operative Surgery in the Medical School of Trinity College, which has been resigned by Mr. Butcher, will not, it is stated, be filled up.

A good many children in the North Dublin Union have recently been suffering from ophthalmia, which, owing to overcrowding, assumed the proportions of an epidemic. The medical officer has recommended that these cases should be sent to the new buildings at Cabra.

The Local Government Board have threatened to dissolve the Midleton Board of Guardians should they persist in neglecting to procure a proper water-supply for the inhabitants.

Dublin, August 28th, 1884.

BELFAST.

(From our own Correspondent.)

QUEEN'S COLLEGE.

FROM the report of the President of Queen's College, Belfast, for the session 1883–4, which has just been issued, I gather that the total number of students enrolled during

the year in each faculty was as follows:—Arts, 205; Law, 22; Engineering, 8; Medicine, 264. Of these, 18 attended in more than one faculty, so that the entire number of students upon the books was 481, of whom 456 matriculated. As compared with the previous year, there was an increase of 13 in Arts, a decrease of 7 in Law, 4 in Engineering, and 21 in Medicine. The total aggregate decrease was 21. The main cause of the decrease was, the President thinks, the dissolution of the Queen's University in the session of 1881–82. He states that up to that time the annual increase in the number of students had been steady and rapid, while at this date it ceased, and a serious decrease at once began, amounting in the session 1882–83 to 65. While the President shows the baneful effect the destruction of the Queen's University had upon the College as a whole, he points out that the Medical School has suffered most. The Royal University, which took the place of the Queen's, at once made a change in the medical curriculum. Candidates for medical degrees are by it compelled to pass the first university examination in Arts before being permitted to present themselves for the first professional examination. Large numbers of the students, the President says, who under other circumstances would prefer to study in Belfast and to take degrees in the Royal University, now go to the Scotch Universities and to the examining boards where no such rule exists. He thinks that the study of an Arts course should not be enforced, but should be optional. The taking of a degree in Arts should likewise be left to the choice of the student.

PROFESSOR REDFERN, M.D.

I am very glad to be able to announce that arrangements have been made by which the distinguished Professor of Anatomy and Physiology will continue to lecture at Queen's College. His resignation at the present juncture would have been a great loss to the medical school in which he has been so long a conspicuous figure. His brilliant address at the late meeting of the British Medical Association will long be remembered by those present during its delivery.

THE ROYAL HOSPITAL.

The quarterly meeting of the General Committee was held on Monday last. From the report I learn that Lord Ashley has become President of the hospital in the place of the late Marquis of Donegal. Reference was made to the refurnishing of one of the wards by Miss Duffin, and to the fact that the Board, by the decision of the Master of the Rolls, may use a portion of the Convalescent Home for the treatment of consumptive patients. In this way they will be able to utilise, for the treatment of consumptive cases, the gift of Mr. Forster Green of £5000. The unpleasant feature in the report is the fact that the balance against the hospital at the end of July amounted to £2295. To meet this there is to be a bazaar and fancy fair in the Ulster Hall next November. Dr. J. W. T. Smith was re-elected physician in accordance with the rule that members of the staff are elected for terms of four years, but are eligible for re-election. Dr. Smith is the senior physician. For the post of surgeon, vacant through the resignation of Dr. John Moore, there were two candidates—viz., Dr. T. K. Wheeler, who has been assistant-surgeon for two years, and Dr. Sinclair, the demonstrator of anatomy at Queen's College; the former gentleman was elected by a very large majority.

HOSPITAL SATURDAY.

On Saturday next this new scheme will be inaugurated, when an appeal will be made to all classes of the community at the corners of streets and in public thoroughfares, where ladies and gentlemen will gladly receive any contributions.

PARIS.

(From our Paris Correspondent.)

THE CHOLERA EPIDEMIC.

The cholera continues to reign in the South of France, but the epidemic is as yet localised in the departments of the littoral of the Mediterranean. The mortality fluctuates between three and eight daily at Toulon and Marseilles, but there has been a slight recrudescence during the past week, which has been attributed to the influx of the fugitives, and to the continued insanitary condition of these places. Panic has again set in among the inhabitants, which is extending to the other parts, and has caused a considerable decrease in the number of persons returning to their homes. At Toulon the unhealthy condition of the troops has been somewhat aggravated, and it is, in consequence, proposed to disperse them. The ambulances, which were about to be closed, have received orders to be kept open. Two medical men have succumbed to cholera — Dr. Maurice Cathala at Cette, and Dr. Eugene Fanton at Arles. Intelligence has also been received of the death at Aix of a Sister of Charity (Sœur Catherine), who has fallen a victim to the disease in the execution of her duty among the sick.

ENTERTAINMENT IN HONOUR OF M. CHEVREUL.

A rather interesting demonstration in the form of a public entertainment is being prepared, to be held in the Quartier Latin on the 1st September, to celebrate the birthday of M. Chevreul, the illustrious chemist and academician, who then enters upon his ninety-ninth year. He was born at Angers on the 31st of August, 1786.

AN EXHIBITION OF BABIES.

An exhibition of infants is to be held in Paris on the 30th of October next, and during as many days after as may be necessary. The infants are to be divided into four classes: 1st, from 1 year to 18 months old; 2nd, from 18 months to 2 years; 3rd, from 2 years to 30 months; 4th, from 30 months to 3 years. The jury will be composed of medical men and artists. The children who win the prizes will not be those of the fattest, but those of the best physical conformation as regards development of bone and muscle. There have been already upwards of 2000 applications, and the register will be closed on the 15th of September.

ERRATUM.—Near the end of my letter in your impression of last week, for "Groust" read *Proust*.

Paris, August 27th.

Obituary.

DR. JULIUS COHNHEIM.

THE closing days of the Copenhagen Congress were saddened by the news announced in the section of Pathology by Professor Virchow of the death of one of the foremost of pathological investigators, Professor Julius Cohnheim of Leipsic. The event took place on the 14th inst., from the chronic affection (renal disease) from which he had been so long a sufferer. At the Congress a vote of condolence was at once passed to the widow of the eminent man; but no one cared then to attempt to review the labour of his too short life. His name stands at the head of the long list of illustrious pupils of an illustrious teacher; and from the time when he held the office of pathological assistant at Berlin to within a few months of his death he had been at work upon the problems of pathological phenomena. Although it is too soon to do justice to all the labours of his life, or to consider in what respects his work has advanced our knowledge, we cannot but feel that in his death science has sustained an irreparable loss. It is some consolation to know that in his "Vorlesungen" he has left behind an enduring monument of his work, which combines the results of physiology and pathology to an extent never before attained. Much of Cohnheim's teaching may be open to criticism as being speculative and transcendental, and yet he seldom advanced a theory without having it supported by well-attested facts. He combined in himself the qualities of the thinker and practical experimenter, and there can be no question that pathology has advanced considerably under his guidance. Julius Cohnheim was still in the prime of life, having just completed his ninth lustrum. After having studied medicine from 1856 to 1860 at Berlin, Würzburg, Greifswald, and Prague, he commenced practice at Berlin. In 1864 he served under Rudolf Virchow as assistant in the Pathological Institute in Berlin. In 1868 he was professor of the same department in the medical school of Kiel, and four years later he was transferred to the chair of Pathology in the University of Breslau, where his prælections attracted so much attention that on the first vacancy he was called to fill the professorship at Leipsic which became immediately associated with his best work. His name will live chiefly for his signal contributions to the doctrine of inflammation, his experimental proofs—by vivisection mainly—having been universally admired for their careful exclusion of every source of fallacy. In all inflammatory processes, without exception, such is his

demonstration, the greatest part of the pus-corpuscles consist of white blood-corpuscles that have passed through the walls of the veins and capillaries. Till this induction was arrived at, Virchow's view was the prevalent one—namely, that the pus-corpuscles are connective-tissue corpuscles transformed through cell-cleavage (*durch Zellentheilung umgebildete Bindegewebskörperchen*). Medicine, indeed, has formulated few more pregnant truths than that which Cohnheim put on a scientific basis:—"Without bloodvessels no inflammation is possible." An anticipation of this doctrine was made in 1848 by our countryman Waller, who occupies towards Cohnheim much the same position that Paciol does to Koch in the discovery of the cholera bacillus. In both cases the honour of converting partial into complete induction rests with the German pathologist.

GEORGE DOWNS, M.D.

DR. DOWNS, of St. Petersgate, Stockport, who died after a brief illness on the 17th inst., was born in 1807. At an early age he was apprenticed with Drs. Killer and Flint, of Stockport, where he remained until he proceeded to the Richmond School of Medicine and to Dublin for a course of study. In the year 1830 he took the degree of M.R.C.S., and fourteen years later the F.R.C.S. Eng., the M.D. of St. Andrews being conferred upon him in 1860. Throughout the whole of his career Dr. Downs has been a zealous and enthusiastic supporter of the Stockport Infirmary, and by his death that institution has suffered a great loss. In 1836 he was appointed honorary surgeon to this institution; in 1858 he resigned that position and was put upon the consulting staff; and at the time of his death he was senior consulting surgeon.

In 1866 Dr. Downs was added to the borough bench of magistrates. For many years he had acted as the certifying surgeon for the district under the Factories and Workshops Act. He was appointed to that position immediately on the passing of the statute and was understood to be the oldest living certifying surgeon in the country.

Medical News.

UNIVERSITY OF LONDON.—At the recent Intermediate Examination in Medicine the following candidates passed in Honours in the subjects mentioned:—

ANATOMY.

FIRST CLASS.

Thompson, J. E. (Exhibition and Gold Medal) Owens College.
Bradford, John Rose, B.Sc. (Gold Medal), University College.
Spencer, Walter George, St. Bartholomew's Hospital.
Clarke, James Jackson, St. Mary's Hospital.
Lys, Henry Grabham, London Hospital.
Wheatley, James, King's College.

SECOND CLASS.

Bowman, Henry Claxton, Owens College.
Clarke, William Frederick, Guy's Hospital.

THIRD CLASS.

Alexander Sidney Robert, Guy's Hospital.
Helme, Thomas A., University of Edinburgh and University College.
Brook, William Henry Breffit, St. Bartholomew's Hospital.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

FIRST CLASS.

Helme, Thomas A. (Exhibition and Gold Medal, University of Edinburgh and University College).
*Spencer, Walter George, St. Bartholomew's Hospital.
*Smith, John Anderson, St. Bartholomew's Hospital.
Bahadhurji, Kaikhosro Nasarvanji, University College.
Eq. Brook, William Henry Breffit, St. Bartholomew's Hospital. Lyndon, Arnold, St. Bartholomew's Hospital. Young, Charles Wheeler Forrest, St. Bartholomew's Hospital.
Eq. Burghard, Frédéric François, Guy's Hospital. Permewan, William, University College. Sunder, Charles Edward, University College.
Eq. Brown, Frederick Nathaniel, St. Bartholomew's Hospital. Gardner, William Thomas, St. Bartholomew's Hospital. Toogood, Frederick Sherman, University College.

SECOND CLASS.

Smith, Hugh, Guy's and London Hospitals.
Trevelyan, Edmond Fauriel, St. Bartholomew's Hospital.

THIRD CLASS.

Luff, Arthur Pearson, B.Sc., St. Mary's Hospital.
Eq. Featherstone, William Barltrop, Queen's and Mason Colleges, Birmingham. Hamel, Julius, University College. Holder, Sydney Ernest, University College. Macevoy, Henry John, B.Sc., St. Thomas's Hospital. Nevins, John Ernest, Guy's Hospital and Liverpool School of Medicine.

ORGANIC CHEMISTRY.

FIRST CLASS.

Young, Charles Wheeler Forrest (Exhibition and Gold Medal), St. Bartholomew's Hospital.
†Luff, Arthur Pearson, St. Mary's Hospital.
Burghard, Frédéric François, Guy's Hospital.

SECOND CLASS.

Bradford, John Rose, University College.
Macevoy, Henry John, St. Thomas's Hospital.
Eq. Alexander, Sidney Robert, Guy's Hospital. Brown, Frederick Nathaniel, St. Bartholomew's Hospital. Mariette, Ernest Paul Alphonse, King's College. Rowell, George, Guy's Hospital.

THIRD CLASS.

Eq. Seville, Charles Frederick, Owens College. Spencer, Walter George, St. Bartholomew's Hospital. Trevelyan, Edmond Fauriel, St. Bartholomew's Hospital.

PHYSIOLOGY AND HISTOLOGY.

FIRST CLASS.

Bradford, John Rose (Exhibition and Gold Medal), University College.
Brown, Herbert Henry (Gold Medal), University College.

SECOND CLASS.

Burghard, Frédéric François, Guy's Hospital.
Spencer, Walter George, St. Bartholomew's Hospital.

THIRD CLASS.

Luff, Arthur Pearson, St. Mary's Hospital.
Bahadhurji, Kaikhosro Nasarvanji, University College.
Alexander, Sidney Robert, Guy's Hospital.
Eq. Lindow, Albert, King's College. Seville, Charles Frederick, Owens College.
Smith, John Anderson, St. Bartholomew's Hospital.

* Obtained the number of marks qualifying for the Exhibition and Medal.
† Obtained the number of marks qualifying for a Medal.

BRITISH MEDICAL SERVICE.—The following is a list of candidates who were successful for appointments as Surgeons in this service at the competitive examination in London on Aug. 11th:—

	Marks.		Marks.
J. R. Forrest	2475	C. W. Johnson	2100
M. W. Russell	2395	W. E. Berryman	2100
W. R. de Morinni	2370	A. T. J. Lilly	2080
B. F. Zimmermann	2355	R. Caldwell	2075
A. F. Stace	2340	C. C. Reilly	2065
A. Stables	2295	S. E. Duncan	2060
J. F. E. McCraith	2285	J. Maher	2030
E. A. C. Smith	2265	A. Perry	2030
W. M. Hewson	2210	S. M. Cordozo	2010
G. E. Moffet	2210	A. de C. Scanlan	2000
H. A. Haines	2185	H. W. James	1990
J. D. Moir	2175	R. Trevor	1990
R. Crofts	2150	H. P. James	1970
G. M. Dobson	2140	W. Turner	1970
G. E. Hale	2130	B. O. W. Norton	1960

INDIAN MEDICAL SERVICE.—The following is a list of candidates for appointments in this service who were successful at the competitive examination held at Burlington House on Aug. 11th and following days. Fifteen candidates competed for five appointments; all were reported qualified:

	Marks.		Marks.
D. Prain	2625	U. N. Mukerji	2411
A. T. Bown	2610	W. L. Price	2378
J. T. W. Leslie	2560		

NAVAL MEDICAL SERVICE.—At the competition for commissions in this Service, held on Aug. 11th and following days, in the Hall of the University of London, Burlington-gardens, the undermentioned gentlemen were the successful candidates:—

	Marks.		Marks.
Von Tunzelmann	2375	A. B. Murdoch	2040
E. B. Townsend	2310	T. Dunlop	2030
A. G. Wildey	2295	S. Johnson	2030
P. B. Handyside	2200	G. A. Draper	2000
H. R. Osborne	2170	W. H. O'Meara	1940
J. M. Rogers	2150	W. W. Jacobs	1910
C. L. Nolan	2135	A. F. Harper	1900
H. F. D. Stephens	2135	H. W. A. Burke	1855
F. H. Julyan	2095	E. R. D. Fasken	1840
E. C. Ward	2090	J. C. F. Whicher	1840
W. R. M. Young	2085	A. G. Andrews	1830
G. L. Baker	2064	A. S. Nance	1820
H. W. G. Doyne	2060	E. St. M. Nepean	1820

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 21st:—

Alcock, Samuel King, Sytch House, Bursiem.
Coker, Owen Cole, Uxbridge-road.
Heath, Charles Joseph, Cromwell-road.
Hughes, Edgar Alfred, Onslow-gardens.
Pemberton, John Oliver, Lawrence-terrace, Tidal Basin.
Piggott, Frederick Cecil Holman, Ormond House, Richmond.

The following gentleman also on the same day passed the Primary Professional Examination:—

Samuel Gordon Smith, University College Hospital.

At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry given annually to medical students by the Society of Apothecaries, the successful candidates were adjudged to be as follows:—

1st.—John Henry Garrett, University College: Gold Medal.
2nd.—Henry Hamilton, Bristol School of Medicine: Silver Medal and Books.

MEDICAL MAGISTRATE.—Mr. John Ferra Watson, M.R.C.S., has been placed on the Commission of the Peace for the City of Norwich.

TWO cases of maltreatment of lunatics by attendants have been under judicial investigation this week—one in Kent, the other in Dumfries. In the former the defendant was convicted; in the latter the charge was not proven.

SHEFFIELD GENERAL INFIRMARY.—On Wednesday last the new wing of this infirmary was formally opened. The new structure has a separate entrance, but is connected with the main building by a corridor. Its cost is under £5500, the whole of which, with the exception of some £600, has already been raised.

THE HAMPSTEAD SMALL-POX HOSPITAL.—The memorial recently adopted at a meeting of ratepayers of the parish of St. John, Hampstead, asking that an injunction be moved for to restrain the Metropolitan Asylums Board from the further use of the Hampstead Small-pox Hospital, was presented to the vestry on the 14th inst. After some discussion, the matter was referred to the Sanitary Committee for consideration and report.

THE LATE DR. CUOLAHAN.—At the meeting of the St. Olave's Board of Guardians, on the 21st inst., the clerk was directed to write a letter, expressing the sympathy of the board for the widow and family of the late Dr. Cuolahan, one of the medical officers of the union, who died very suddenly on the previous day. For twelve years the deceased had served the board most faithfully, and only two hours before his death was engaged in the performance of his duties.

HOSPITAL SATURDAY FUND.—On the 26th inst. meetings were held in various parts of London to devise the best means of augmenting the resources of this fund, and of consequently extending its utility. Amongst the different means it was resolved to follow are church parades and sermons on behalf of the fund. Facilities will be afforded for the purposes of the street collection at Marlborough House, the Health Exhibition, Crystal Palace, and other places of public resort.

EXETER HOSPITAL SATURDAY.—For the Devon and Exeter Hospital, the Hospital Saturday Committee at Exeter collected last year £300. In return they had a right to occupy eight beds as patients; and if these were always engaged, it would represent an annual cost of £4200. Some of the governors having recently expressed an opinion that it was not worth their while to continue to receive the Hospital Saturday subscription, at a meeting of the committee of the fund on the 24th inst., the expression of such a spirit by the governors was very warmly condemned, and it was decided to communicate with the authorities, so as to determine whether or not the subscription to the hospital should be continued or devoted to some other institution of interest to the subscribers.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ADKINS, GEORGE, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health to the Plympton St. Mary Union Rural Sanitary District till July 20th, 1887.

BREW, THOMAS FOLEY, F.R.C.S.I., L.M.Dub., has been appointed Medical Officer to the Workhouse, Enniskillen Union.

CAIGER, F. F., M.B., B.S., M.R.C.S., L.R.C.P., has been appointed Resident House-Physician to St. Thomas's Hospital.

CLARKE, JAMES, M.D.Q.U.I., Surgeon Bengal Army, has been appointed Resident Physician to the Eden Hospital for Diseases of Women and Children, Calcutta.

FOTTRELL, W. J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Resident Surgeon to the Jervis-street Hospital, Dublin, vice Chance.

GREEN, C. D., M.R.C.S., L.R.C.P., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

GREENSILL, J. NICHOLAS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse, Martley Union.

GUY, WILLIAM, L.R.C.S.Ed., has been appointed Medical Officer for the Gosforth District of the Whitehaven Union, vice Parker.

HUDSON, Mr. ERNEST, has been appointed Senior House-Surgeon to the Royal London (Moorfields) Ophthalmic Hospital.

HUDSON, HUBERT ERNEST, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Sixth District of the Battle Union, vice Duke.

HULL, W., M.B., M.R.C.S., L.R.C.P., has been appointed Resident Accoucheur to St. Thomas's Hospital.

JOHNSTON, G. D., M.R.C.S., L.R.C.P., has been appointed Resident House-Physician to St. Thomas's Hospital.

JOSEPH, J. RAPHAEL, L.F.P.S.Glasg., L.M., L.S.A.Lond., late Surgeon-Superintendent Queensland Emigration Service, has been appointed Resident Surgeon to the Hospital for Pacific Islanders in the Maryborough District, Queensland.

KEARNEY, MATHEW, L.R.C.S.I., has been appointed Medical Officer to the Dundalk Workhouse.

LAWSON, R., M.R.C.S., L.S.A.Lond., has been appointed Assistant House-Physician to St. Thomas's Hospital.

LYON, T. GLOVER, M.R.C.S., L.R.C.P., has been reappointed Clinical Assistant in the Skin and Ear Department, St. Thomas's Hospital.

MACKENZIE, H. W. G., M.A., M.B., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat, St. Thomas's Hospital.

ORFORD, J., M.R.C.S., L.R.C.P., L.S.A.Lond., has been appointed House-Surgeon to St. Thomas's Hospital.

RICHARDS, WILLIAM, M.B., C.M.Ed., has been appointed House-Surgeon to the Queen's Hospital, Birmingham, vice Charles Sanders, M.B.Lond., resigned.

ROBINSON, H. B., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to St. Thomas's Hospital.

ROWLANDS, HUGH PUGH, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Llanegryn District of the Dolgelly Union, and for the Towyn District of the Machynlleth Union.

RYAN, JAMES D., L. & L.M.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Dungarstown Dispensary District, co. Wicklow.

STONE, F. W. S., M.R.C.S., L.R.C.P., has been reappointed Non-resident House-Physician to St. Thomas's Hospital.

Births, Marriages, and Deaths.

BIRTHS.

DUDLEY.—On the 16th inst., at the Royal Naval Hospital, Lisbon, the wife of John Dudley, M.B., B.A., Surgeon R.N., of a son.

DUKE.—On the 25th inst., at 9, Cornwall-road, Westbourne-park, W., the wife of G. Amos Duke, M.R.C.S.Eng., L.S.A.Lond., of a daughter.

MASTERS.—On the 12th inst., at Westhall House, Brook-green, West Kensington, the wife of J. Alfred Masters, L.R.C.P.Lond., &c., of twin daughters.

MULLIN.—On the 21st inst., at Miskin-street, Cathays, Cardiff, the wife of James Mullin, M.A., M.D., of a daughter.

MARRIAGES.

GABB—PRICE.—On the 20th inst., at St. Anne's Church, Bowdley, by the Rev. W. O. Parker Ford, M.A., Vicar, assisted by the Rev. E. H. Winnington Ingram, M.A., Rector of Ribbesford, J. Percy A. Gabb, M.D.Lond., Guildford, Surrey, eldest son of John Gabb, Surgeon, Bewdley, to Ada, only daughter of Samuel Price, J.P., Bewdley.

HERRON—BATHURST.—On the 21st inst., at St. Mark's Church, West Hackney, James Herron, M.D., to Sarah Elizabeth (Bess), only daughter of the late H. M. Bathurst, Broseley, Shropshire.

JOHNSTON—SMITH.—On the 20th inst., at St. John's Church, Dronfield, by the father of the bride, assisted by the Rev. J. T. F. Aldred, Vicar of Dore, Rev. A. E. Auchinleck, Rector of Car-Colston, and the Rev. E. S. Rounds, Curate of St. John's, Dronfield, John Somerville Johnston, Physician and Surgeon, Spital Hill, Sheffield, to Frances Mary (Fannie) only daughter of the Rev. W. H. Smith, M.A., Vicar of Dronfield.

SYDNEY—HORNSBY.—On the 26th inst., at the Parish Church, Bedfont, Middlesex, by the Rev. Morley B. Saunders, uncle of the bride, Henry Sydney, M.D., of Townall Gardens, Hounslow, to Ellen Isabel, third daughter of the late Colonel H. A. Hornsby, 2nd Madras E.I.I.

DEATHS.

CHAMBERS.—On the 21st inst., at Margate, Frederick Chambers, L.S.A.Lond., J.P., aged 83.

EVERETT.—On the 21st inst., at Sydenham, David Everett, F.R.C.S., late of Worcester, aged 66.

HAVERS.—On the 20th inst., at White Hill, Great Berkhampsted, Herts, John Havers, F.R.C.S., in his 70th year.

HILLMAN.—On the 19th inst., at Beech House, Charmouth, Dorset, William Hillman, Brigade Surgeon A.M.D. (retired), youngest son of the late Robert Hillman, of Lyme Regis, Dorset, aged 51.

PEAR.—On the 21st inst., at his residence, Park-crescent, Brighton, Geoffery Pear, M.D., late of Windsor, 78.

WESTMACOTT.—On the 23rd inst., John Guise Westmacott, M.D., L.R.C.S.Edin., of Howley House, Maida-hill, aged 73.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 28th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 22	30·21	S.E.	67	58	112	83	58	..	Hazy
,, 23	30·14	E.	65	63	120	82	59	..	Hazy
,, 24	30·12	W.	75	65	122	87	60	..	Bright
,, 25	29·97	N.E.	68	64	85	70	64	·02	Cloudy
,, 26	30·16	N.	55	50	94	63	49	·02	Bright
,, 27	29·95	N.W.	55	51	72	61	51	..	Overcast
,, 28	29·68	W.	61	60	105	68	54	·26	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

NEW HOUSES.

THE *Gesundheit* quotes a proposal drawn up by a Magdeburg society for defining the period during which new houses should be allowed to dry before being inhabited. It is suggested that if the building has been roofed during the winter months (Oct. 1st to April 1st) it should be allowed to dry for four months, while three months would suffice at other times of the year. There should be at least eight weeks between the completion of the internal plastering and the beginning of the occupation. In special cases, where technical and medical experts agreed that the rooms (as ascertained by hygroscopic observation) were fit for habitation, it would be optional for building inspectors to shorten the above-named period from three to two months.

"RUPTURE OF THE COVERINGS OF AN INGUINAL HERNIA."

To the Editor of THE LANCET.

SIR,—With regard to Mr. Bernard Pitts' letter relative to the above in your issue of last week, I may mention that I believe the correctness of the man's statement, for the following reasons. I myself saw the cab drive up to the hospital, and saw the man leave it unaided and alone; and the manner in which he walked into the hospital (ten or twelve yards), without any apparent difficulty, proved there was no physical reason why he could not have walked the distance specified. That he did see a surgeon, or someone at the surgery, there was no denying, for there was the lint wrapped round the parts. Judging the distance from where he said the rupture took place to the surgery, I do not think a quarter of a mile was any exaggeration.

I am, Sir, yours truly,

Brockley, S.E., Aug. 27th, 1884. W. MILNE ANDERSON.

M.R.C.S. (St. Leonards).—The cases, as stated, are not parallel. An unregistered practitioner is liable to a penalty for taking or using a title implying that he is registered, and he cannot recover charges in a court of law.

Miss Richardson is referred to our advertising columns, and to a letter which appears in our present number.

Rev. F. Smith.—It would be against our rules to publish a letter of the kind.

ACUTE MANIA IN CHILDREN.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers tell me of any recorded cases of acute mania occurring in a child of five years. If so, I should be glad to know where I could see such records.—Yours truly,

HARDING H. TOMKINS, M.R.C.S.,
Infirmary for Children, Liverpool, Assistant House-Surgeon.
Aug. 26th, 1884.

SEWING MACHINE WORK.

THE question of the effect upon the system of continuously working the sewing machine as an employment has lately been receiving attention in Germany. Herr Eulenburg, a leading Prussian official, has written in vindication of the machine, quoting Dr. Blaschka's testimony in its favour. Dr. Ohausen, who was connected with the Berlin Hygienic Exhibition of last year, has expressed the opinion that the sewing machine does away with the principal disadvantage of hand needlework—the continued bent position of the worker. Only beginners at the sewing machine bend forward, those who have learned its use being able to maintain a healthy position of the body. The movement of the foot he considers beneficial to the organism, as it encourages circulation. The movements of the body in arranging and holding the work are, he thinks, such as to resemble in a certain degree a gymnastic exercise. When carried on in good air the working of the sewing machine is of advantage to the digestive and respiratory organs. Importance is attached to the kind of chair used, so that it may readily accommodate itself to the movements of the body. The garments should on no account be worn tight. Dr. Ohausen has found no consumptive tendency amongst the many sewing machine workers he has attended, and considers the work may even neutralise a hereditary disposition of that kind.

Mr. James Cheese.—Such specimens may be obtained from Mr. A. Cole, Notting-hill; from Messrs. Beck, 68, Cornhill; and from other microscopical dealers.

SKILLED NURSING.

To the Editor of THE LANCET.

SIR,—Everyone knows in case of illness the comfort of skilled and competent nursing; but until the need for a nurse arises few persons are aware that there is any difficulty in at once securing a first-rate one, or have any idea of the disadvantages with which this most useful class has to contend.

A nurse must spend no inconsiderable amount of both time and money ere she attains proficiency; and when this is accomplished how is she to obtain remunerative employment? She must either become an inmate of a home, or a member of the non-resident staff attached to an institute, or she must trust to private recommendation. In the first case she is boarded, lodged, and paid £20, or at most £25, a year. She is sent out as patients apply at the home, and may be in constant employment; but her earnings, whether small or great, are entirely forfeited to the funds of the home. Thus the nurse uses her skill and exhausts her strength for a bare subsistence, and it is evident can make no provision for old age or failing health. If she joins the out-door staff, she has, when out of work, to provide for herself, and when employed the rate of pay is fixed by the institute, and one-half of it, in some cases even more, is claimed by the home. What chance is there that the nurse can lay by any part of her earnings? Last comes private recommendation; and to a few, but only to a very few, this proves an El Dorado. A doctor is struck by the tenderness and skill of a nurse, notes her name and address, places her at once with another patient, and, fortunately for the nurse, gets her name and capabilities well imprinted on his memory, so that when asked to recommend a nurse, "Nurse ——, 14, —— street," immediately occurs to him, and, in consequence, she is often applied for when already engaged. But the doctor's busy brain cannot retain several addresses, though he is sure he knows of many good nurses. If again applied to, he is very sorry Nurse —— is unavailable, but assures the applicant that some one else can be obtained from the homes. The case of the nurse seems hard enough as regards payment; but she is also harassed by numerous restrictions. Her testimonials must be deposited at the home, and are thus useless to obtain an engagement, except through that medium, and she is forbidden to be transferred from one patient to another without the intervention of the institute—in fact, it seems decided that the nurse shall be debarred from most of the advantages her profession would naturally give her.

Some physicians, realising the hardships of the case, have suggested to us to open an institute for first-class nurses, through which, by abolishing all vexatious restrictions and excessive payments, they may reap the benefit of their own toil, and be enabled to save a portion of their earnings for the time of need. All means taken to free the nurse from personal anxiety, every inducement that can be offered to increase her liking for her work, must conduce to the welfare and comfort of her patients; and it is therefore in the interests of all sufferers that we would appeal to the public to support this endeavour to benefit a miserably underpaid and most deserving class.

I am, Sir, yours obediently,

126, Regent-street, Aug. 21st, 1884. E. FAITHFULL.

Vox Medicinæ.—It would be hardly fair to insert our correspondent's letter without the name of the writer being attached thereto.

A QUERY.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if some of your readers will tell me of an institution in which a dumb child, seven years old, of defective intellect, could be received either gratuitously or by payment of a small sum.

I am, Sir, yours truly,

Aug. 27th, 1884. MEDICUS RUSTICUS.

H. B. S (Bristol).—In Continental Europe during the Middle Ages, and in England down to the time of Queen Elizabeth (see Sir Walter Scott's "Kenilworth," chapter xiv.), the physician was frequently called an artist. In German the word in this sense still survives in "arzt" (physician), which is an abbreviation of "artista," which, in turn, is itself a Middle High German derivative from the Latin "ars."

Ferret.—The point suggested has certainly not been overlooked.

FUNGI AND CHOLERA.

To the Editor of THE LANCET.

SIR,—As a fungus eater, grower, and observer, I desire to make a few suggestions derived from personal experiment and observation. My reason for communicating anything calculated to imply impertinence and to deprive me of a later honour is, that my suggestions may give a wider scope and basis to those who are making cholera their study. It, moreover, removes the burning germ question into the cooler regions of general biology.

1. Some of the symptoms of cholera are analogous to those produced by the genus agaricus—namely, to those which act by an alkaloid, such as muscarin, and not by an irritant resin. 2. Many micrococci, bacilli, and leptothrix forms are identical; penicilli, toruli, and saprolegnaceæ are identical; and all these, if not identical, are closely related in their physiology. 3. Chemical products in penicillum are in many cases the same as those in agaricus; moreover, the movements are common to the sporangia of both, these movements being related to the escape of the nuclei or spores, and apparently absorption of water. 4. The chemical principle occurring in the sporangia almost constantly makes up a large portion of the contents of the sporangia of both penicilli and agarics. It is soluble in ether and spirit, separates in feathery crystals and volatilises by heat. The odour is that of oil of amber. 5. I would recall to mind the power fungi have to break up albuminous materials, such as mucin, into crystalline nitrogenous principles. As regards the chemical substance before mentioned, it seems to be the substance from which the metacelli ose of the hyphæ is formed. The crystals, moreover, treated by weak oxidisers, show an abundance of micrococcous forms. Whether this arises from impurities I have not yet ascertained.

Hence it is the chemico-physiology of larger fungi which will help to throw light on the chemico-physiology of germs.

I am, Sir, yours faithfully,

St. Thomas's Hospital, Aug. 21st, 1884. S.

A REMARKABLE CASE.

To the Editor of THE LANCET.

SIR,—Perhaps the novelty of the following case may induce you to find space in your journal for its notice.

A man much distressed, and evidently in great pain, came to me the other evening, saying he had a "soda-water bottle in his fundament." Upon at once letting down his trousers (which were covered with blood), I noticed blood trickling from the rectum. On introducing a forefinger into the bowel I could just detect the edge of the mouth of a bottle, and, by inserting the middle finger as well, was able, after some difficulty, and employing all the traction my limited hold permitted, to extract, not an ordinary soda-water bottle, but one which is, I think, used to contain ginger ale, the length of which was seven inches and a quarter, and the circumference seven inches. His story was that, as his bowels had not been opened for more than a week, and as aperients had not acted, some one advised him to open them by means of a bottle, and that in attempting this it had slipped from his grasp, and all his efforts to get it again were unavailing.

I am, Sir, yours obediently,

Finchley, Aug. 27th, 1884. AUG. DIXEY, M.D.

HYDROCELE.

To the Editor of THE LANCET.

SIR,—During the past two years I have met with two cases of hydrocele, of a similar nature to the one described by Dr. H. C. Cameron in THE LANCET of May 10th. One occurred in my own practice, and one in the practice of a friend, who sent me the fluid for examination. In both cases the fluid was similar to that in Dr. Cameron's case. It had the appearance of milk, a neutral reaction, and was coagulated by heat. The microscopical appearances were similar to those of chyle. Sir W. Fergusson's case was presumably one of filarial disease, as similar fluid was found in the other serous cavities, and the urine was chylous. In my case there was no evidence of filarial disease.

I am, Sir, yours truly,

General Hospital, Madras, July 26th, 1884. J. MAITLAND.

CANNULA FOR INJECTING.

To the Editor of THE LANCET.

SIR,—In answer to inquiries, I beg to state that the hollow, blunt, or closed cannula, with an eyelet at the sides like a catheter, left by me at Marseilles, for injecting fluid into the peritoneum, was supplied me by Messrs. Krohne and Sesemann of Duke-street, Manchester-square, from a model, I believe, of Dr. B. W. Richardson's. I fancy a small catheter, male or female, would answer. The whole is then attached to a syringe by an indiarubber tube. A Dieulafoy's aspirator needle answers well for injecting the cellular tissue. Messrs. Krohne and Sesemann supply both for 12s.

I am, Sir, yours faithfully,

London, Aug. 22rd, 1884. CAMERON MACDOWALL.

Medicus.—We see no good to be served by publishing the exceedingly rude letter forwarded to us by our correspondent. We sincerely congratulate him on not securing the services of a locum tenens who could indite such an epistle.

WILL *Constant Reader*, whose letter appeared in our columns on the 16th inst., forward his address, which has been mislaid?

Mr. Knight Treves.—Next week.

Mr. H. B. H. Turner.—We are not publishing the papers in full.

"PREVENTION OF 'HARVEST BUMPS.'"

To the Editor of THE LANCET.

SIR,—If "M.D." will read Dr. Ringer's remarks on Sulphur in his work on "Therapeutics," p. 131, and various comments on this drug, he will be better able to judge whether my recommendation "was seriously meant." I am aware of the disagreeable smell of sulphur, and so recommended lavender water to be added. As "necessity is the mother of invention," fumigations in lodgings, I think, will not be impossible. "M.D." fails to comment vividly on the usage of carbolic soap. I may, however, refer him to the researches of the late Sir Erasmus Wilson, and Drs. Roberts of Manchester, Anderson, and Hebra, and he will find thereby that opinion differs. He also seems to ignore the fact that a family going for a holiday to the seaside need not trouble themselves about, or provide themselves with, all the means mentioned in my letter, as at all seaside places and health-resorts plenty of chemists are to be found. Harvest bumps seem more prevalent in the country than at the seaside. Seaside bumps, I think, therefore belong to a different nomenclature of the acarus autumnalis, as described by Professors Owen and Latreille.

I am, Sir, yours obediently,

Woburn-place, Aug. 25th, 1884. C. S. TAYLOR, M.D., M.Ch., B.Sc.

Albuminuria.—We should advise the perusal of Senator's article on the Hygiene of Albuminuria, published in the *Berliner Klinische Wochenschrift* for 1882, vol. ii.

X. X.—A list of public vaccinators authorised to grant certificates of proficiency in vaccination is issued by the Local Government Board.

Mr. Norman.—We do not prescribe.

"THE LONDON UNIVERSITY PRELIMINARY SCIENTIFIC EXAMINATION."

To the Editor of THE LANCET.

SIR,—The Censor of the Royal College of Physicians deserves the best thanks of students and their guardians or parents for his exposure of the absurd and cruel examination as regards Physics at the late Preliminary Science Examination of the London University. My ward informs me that, although a pupil of Professor Cary Foster, and regularly attending his lectures, he was never taught some of the subjects referred to in the questions. As the Professor was paid for imparting knowledge on subjects relating to the examination of which he was one of two examiners, I think he failed to carry out his duties; and surely it would have been but fair to have given questions which tested the student's knowledge of what his Professor had taught him. It appears to me that it would be a great waste of a medical student's time to devote so much of it as would be required to make him proficient in an outside subject, such as Physics, if the examinations are to be conducted in a like manner as the last was; and I trust the authorities will exercise their discretion in prohibiting such an unfair set of questions in future.

I am, Sir, yours truly,

Aug. 23rd, 1884. AN OLD SURGEON.

Mr. William A. Duncan.—Zur Frage der Behandlung der Uteruscarcinome, Wiener Klinik, 1882.

Mr. J. B. Harrison.—Either, provided the vaccinifer is healthy.

CASE IN DENTAL PRACTICE.

To the Editor of THE LANCET.

SIR,—The following case, being of unusual occurrence, will perhaps be deemed of sufficient interest to merit a place in your columns.

A patient aged fifty-five, the widow of a physician, had complained of pain and deafness of the left ear for about three years, for which she had been treated by several medical men, one of whom at last advised her to consult an aurist. Previous to doing so she came to me, on Aug. 11th, complaining of pain in an upper canine, at the same time mentioning the above circumstances. This tooth was extensively decayed, and the pulp cavity full of pus, but with no extensive peridental mischief. Thinking this a possible cause of the deafness (no other tooth or stump being on that side), I advised its removal, which I did under gas on the same day as the patient visited me. Upon returning next day she assured me that she had felt no further "pain or fulness in the ear, and the deafness was quite cured."

I am, Sir, yours truly,

PERCY MAY, M.R.C.S., L.D.S.Ed.

Endsleigh-gardens, N.W., Aug. 22nd, 1884.

M.D.—Either Cassell's or (a much larger work) Wood's Household Practice of Medicine (London: Sampson Low, Marston, and Co.)

A Seeker of Fair Play has not enclosed his card.

ERRATUM.—Under the heading "Stray Notes on the Congress," in our issue of last week, p. 336, for Professor "Panum" read *Plum*, as President of the Surgical Section.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir E. C. Owen, London; Dr. Laffan, Cashel; Dr. W. A. Mackay, Huelva; Mr. E. Owen, London; Dr. Vanlyke Carter, Bombay; Mr. J. Wilson, Glasgow; Mr. P. T. Ouvry, Leighton Buzzard; Mr. N. E. Davies, Sherborne; Rev. R. L. Bamfield, West Anstey; Mr T. Cooke, London; Dr. Philipson, Newcastle-on-Tyne; Mr. Wm. Thomson, Dublin; Dr. Kirk, Glasgow; Mr. Harrison, Mansfield; Dr. Warren (Boy), Paris; Dr. Mantle; Mr. T. Fletcher; Messrs. Le Grand and Sutcliffe, London; Dr. Saundby, Birmingham; Mr. Prosser Wight, Wigan; Rev. F. Smith, Wickwar; Dr. Cameron; Dr. D. Lindsay, Cockermouth; Mrs. Keelan, Parkstone; Mr. Scott, London; Dr. Gobat, Overton; Mr. Percy May, London; Mr. J. P. Glover, London; Mr. H. E. Friend, London; Dr. E. W. White, Chatham; Mr. Jesse, Henbury; Mr. Greenwood, Hanley; Mr. Mason; Dr. McNaughton, London; Dr. Harrison; Mr. Woodland, London; Mr. F. Jordan, London; Dr. Whitla; Mr. Thorpe; Messrs. Dawson Bros., Montreal; Mr. Barwell, London; Mr. Whiteley, Leeds; Mr. Miller, Glasgow; Miss Cooper, London; Mr. Watkins, Worcester; M. Huband, Gironde; Mr. Withe; Mr. Knesbone, Bedford; Mr. Hawkins, Bushey; Messrs. Arnold and Sons, London; Mr. Browne; Mr. Armstrong; Mr. Hubbard, New Haven, U.S.A.; Mr. W. H. J. Brown, Cochranefield; Mr. Johnston; Messrs. Smith and Son, Birmingham; Messrs. Oliver and Boyd, Edinburgh; Mr. Pearson, Cork; Mrs. Tillet, Cheltenham; Messrs. Boake and Co.; Messrs. Blackie and Sons, Edinburgh; Mr. Creddock, Gloucester; Dr. Harding, Cape Colony; Dr. Lionel Beale, London; Dr. Collier, Gorleston; Mr. Sydney Jones, London; Mr. Pybus; Dr. Dixey, Finchley; Dr. F. E Wilkinson, Sydenham; Mr. E. S. Bishop, Manchester; Dr. H. MacDonnell, Dundalk; Mr. Knight Treves, Margate; Dr. Ledlard, Carlisle; Mr. Trenerry, Bristol; Mr. Villican, Dublin; Dr. Mackintosh, Dublin; Mr. Sullivan, Leicester; Mr. Mann, Bradford; Messrs. Whitehead and Co., Manchester; Messrs. Robertson & Scott, Edinburgh; Mr. Hartin; Mr. Armstrong; Mr. Makuna, Ystead; Beta, Finsbury; Mechanic; A. B., Swansea; S.; An Old Surgeon; Vox Medicinæ; Medicus Rusticus; Ferret; St. George's; M.R.C.S.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Foot; Mr. Robson, South Shields; Mr. Potter, Brixton; Mr. Brandfoot, Sunderland; Miss Mayer; Mr. Hamilton; Mr. Ferguson, York; Mr. Kerr, Glasgow; Mr. Brown, Douglas; Mr. Wheeler, Manchester; Mr. Durie, Olmskirk; Mr. Roberts; Mr. Birchall, Liverpool; Mr. Brown, Perth; Mr. Joss; Mr. Brittain; Dr. Eberle, Thirsk; Mr. Jenkins, Tawley; Mr. Patterson, Exmouth; Mr. Lving, Southport; Mr. MacPherson, Middlesborough; Messrs. Feltoe and Sons, London; Mr. Oakfield, York; Mr. Grattan, Cork; Mr. Hopkins, Bath; Messrs. Mills and Co., Trinidad; Mr. Heakins; Dr. Fletcher, Bury; Mr. Dixie, Oxford; Dr. Clarke, Tunbridge Wells; Mr. Heaton; Miss Stutchbury, Clifton; Mr. White, Bayswater; Miss Peace, Barron; Messrs. Kegan Paul and Co., London; Mr. Saunders, Peebles; Dr. Dunas, Leytonstone; Tutus; Ebor, York; A. W. W.; A. T. S., Biggleswade; Invalid; G., South Kensington; F.S.A., Wye; Ergates; Medicus, Sheffield; Celeritas; C. H.; T. J. H., Streatham; Medicus, Ashburton; H. H., Lowestoft; S. A. B.; North Hants; Dens, Chester; Prove; N. R, Salisbury; A. B., Egremont; Medicus, Aberdeen; A. M. J., Ramsgate; Austral, Howdon-on-Tyne; Lecturer, Edinburgh; Medical, Paddington; J. R., Camberwell; A. C., Ryde; C. M., Huddersfield; P. P.; Medicus, Bristol; Lex; P.P., Notts.

Kimberley Daily Independent, Times of India, Pioneer, Calcutta Englishman, Demerara Daily Chronicle, Newcastle Daily Journal, Liverpool Courier, Inverjordon Times, The Australasian, Sheffield Daily Telegraph, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, September 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, September 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, September 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, September 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, September 6.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

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